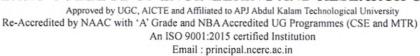


# NEHRU COLLEGE OF ENGINEERING AND RESEARCH CENTRE





# 1.3.1 - Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Sl No	Course Code	Course Name	Relevant Issues	Page number
1	MCN 201 Sustainable Engineering E		Environment and Sustainability	2
2	EST 200	Design and Engineering	Environment and Sustainability	7
3	HUT 200	Professional Ethics	Professional Ethics	16
4	MCN 202	Constitution of India	Gender& Human Values	22
5	HUN 102	Professional Communication	Human Values	28
6	HUT 101	Life Skills	Human Values	33
7	MCN 301	Disaster Management	Environment and Sustainability	39
8	20MBA115	Legal System for Business	Gender& Human Values	51
9	20MBA113	Ethics, Governance and Corporate Responsibility	Professional Ethics	57
9	20MBA314	Management of Sustainable Business	Environment and Sustainability	63



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CODE		CATEGORY	L	T	P	CREDIT
MCN201	SUSTAINABLE ENGINEERING		2	0	0	NIL

**Preamble:** Objective of this course is to inculcate in students an awareness of environmental issues and the global initiatives towards attaining sustainability. The student should realize the potential of technology in bringing in sustainable practices.

Prerequisite: NIL

Course Outcomes: After the completion of the course the student will be able to

CO 1	Understand the relevance and the concept of sustainability and the global initiatives in this direction
CO 2	Explain the different types of environmental pollution problems and their sustainable solutions
CO 3	Discuss the environmental regulations and standards
CO 4	Outline the concepts related to conventional and non-conventional energy
CO 5	Demonstrate the broad perspective of sustainable practices by utilizing engineering knowledge and principles

# Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO 1						2	3					2
CO 2						2	3					2
CO 3						2	3					2
CO 4						2	3			570		2
CO 5						2	3					2

### Assessment Pattern

#### Mark distribution

Bloom's Category	Continuou	is Assessment Tests	End Semester Examination			
	1	2				
Remember	20	20	40			
Understand	20	20	40			
Apply	10	10	20			
Analyse	CIO.	10世纪2014年				
Evaluate						
Create		4				

### Continuous Internal Evaluation Pattern:

Attendance : 10 marks
Continuous Assessment Test (2 numbers) : 25 marks
Assignment/Quiz/Course project : 15 marks

End Semester Examination Pattern: There will be two parts; Part A and Part B. Part A contain 10 questions with 2 questions from each module, having 3 marks for each question. Students should answer all questions. Part B contains 2 questions from each module of which student should answer any one. Each question can have maximum 2 sub-divisions and carry 14 marks.

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Total Marks	CIE	ESE	ESE Duration
150	50	100	3 hours

### Course Level Assessment Questions

Course Outcome 1 (CO1): Understand the relevance and the concept of sustainability and the global initiatives in this direction

- 1. Explain with an example a technology that has contributed positively to sustainable development.
- 2. Write a note on Millennium Development Goals.

Course Outcome 2 (CO2): Explain the different types of environmental pollution problems and their sustainable solutions

- 1. Explain the 3R concept in solid waste management?
- 2. Write a note on any one environmental pollution problem and suggest a sustainable solution.
- 3. In the absence of green house effect the surface temperature of earth would not have been suitable for survival of life on earth. Comment on this statement.

Course Outcome 3(CO3): Discuss the environmental regulations and standards

- 1. Illustrate Life Cycle Analysis with an example of your choice.
- 2. "Nature is the most successful designer and the most brilliant engineer that has ever evolved". Discuss.

Course Outcome 4 (CO4): Outline the concepts related to conventional and non-conventional energy

- 1. Suggest a sustainable system to generate hot water in a residential building in tropical climate.
- 2. Enumerate the impacts of biomass energy on the environment.

Course Outcome 5 (CO5): Demonstrate the broad perspective of sustainable practices by utilizing engineering knowledge and principles

1. Suggest suitable measures to make the conveyance facilities used by your institution sustainable.

### Model Question paper

#### Part A

(Answer all questions. Each question carries 3 marks each)

- 1. Define sustainable development.
- 2. Write a short note on Millennium Development Goals.
- 3. Describe carbon credit.
- 4. Give an account of climate change and its effect on environment.
- 5. Describe biomimicry? Give two examples.
- 6. Explain the basic concept of Life Cycle Assessment.
- 7. Name three renewable energy sources.

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- 8. Mention some of the disadvantages of wind energy.
- 9. Enlist some of the features of sustainable habitat.
- 10. Explain green engineering.

# Part B

# (Answer one question from each module. Each question carries 14 marks)

11. Discuss the evolution of the concept of sustainability. Comment on its relevance in the modern world.

OR

- 12. Explain Clean Development Mechanism.
- 13. Explain the common sources of water pollution and its harmful effects.

OR

- 14. Give an account of solid waste management in cities.
- 15. Explain the different steps involved in the conduct of Environmental Impact Assessment.

OR

- 16. Suggest some methods to create public awareness on environmental issues.
- 17. Comment on the statement, "Almost all energy that man uses comes from the Sun".

OR

- 18. Write notes on:
  - a. Land degradation due to water logging.
  - b. Over exploitation of water.
- 19. Discuss the elements related to sustainable urbanisation.

OR

20. Discuss any three methods by which you can increase energy efficiency in buildings.

Nita Cardens
The second Control

### Syllabus

Sustainability- need and concept, technology and sustainable development-Natural resources and their pollution, Carbon credits, Zero waste concept. Life Cycle Analysis, Environmental Impact Assessment studies, Sustainable habitat, Green buildings, green materials, Energy, Conventional and renewable sources, Sustainable urbanization, Industrial Ecology.

### Module 1

Sustainability: Introduction, concept, evolution of the concept; Social, environmental and economic sustainability concepts; Sustainable development, Nexus between Technology and Sustainable development; Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs), Clean Development Mechanism (CDM).

#### Module 2

Environmental Pollution: Air Pollution and its effects, Water pollution and its sources, Zero waste concept and 3 R concepts in solid waste management; Greenhouse effect, Global warming, Climate change, Ozone layer depletion, Carbon credits, carbon trading and carbon foot print, legal provisions for environmental protection.

#### Module 3

Environmental management standards: ISO 14001:2015 frame work and benefits, Scope and goal of Life Cycle Analysis (LCA), Circular economy, Bio-mimicking, Environment Impact Assessment (EIA), Industrial ecology and industrial symbiosis.

#### Module 4

Resources and its utilisation: Basic concepts of Conventional and non-conventional energy, General idea about solar energy, Fuel cells, Wind energy, Small hydro plants, bio-fuels, Energy derived from oceans and Geothermal energy.

### Module 5

Sustainability practices: Basic concept of sustainable habitat, Methods for increasing energy efficiency in buildings, Green Engineering, Sustainable Urbanisation, Sustainable cities, Sustainable transport.

# Reference Books

- 1. Allen, D. T. and Shonnard, D. R., Sustainability Engineering: Concepts, Design and Case Studies, Prentice Hall.
- 2. Bradley. A.S; Adebayo, A.O., Maria, P. Engineering applications in sustainable design and development, Cengage learning
- 3. Environment Impact Assessment Guidelines, Notification of Government of India, 2006
- 4. Mackenthun, K.M., Basic Concepts in Environmental Management, Lewis Publication, London, 1998
- 5. ECBC Code 2007, Bureau of Energy Efficiency, New Delhi Bureau of Energy Efficiency Publications-Rating System, TERI Publications - GRIHA Rating System
- 6. Ni bin Chang, Systems Analysis for Sustainable Engineering: Theory and Applications, McGraw-Hill Professional.
- 7. Twidell, J. W. and Weir, A. D., Renewable Energy Resources, English Language Book Society (ELBS).

8. Purohit, S. S., Green Technology - An approach for sustainable environment, Agrobication



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# Course Contents and Lecture Schedule

No	Topic	No. of Lectures
1	Sustainability	
1.1	Introduction, concept, evolution of the concept	1
1.2	Social, environmental and economic sustainability concepts	1
1.3	Sustainable development, Nexus between Technology and Sustainable development	1
1.4	Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs)	1
1.5	Clean Development Mechanism (CDM)	1
2	Environmental Pollution	
2.1	Air Pollution and its effects	1
2.2	Water pollution and its sources	1
2.3	Zero waste concept and 3 R concepts in solid waste management	1
2.4	Greenhouse effect, Global warming, Climate change, Ozone layer depletion	1
2.5	Carbon credits, carbon trading and carbon foot print.	1
2.6	Legal provisions for environmental protection.	1
3	Environmental management standards	
3.1	Environmental management standards	1
3.2	ISO 14001:2015 frame work and benefits	1
3.3	Scope and Goal of Life Cycle Analysis (LCA)	1
3.4	Circular economy, Bio-mimicking	1
3.5	Environment Impact Assessment (EIA)	1
3.6	Industrial Ecology, Industrial Symbiosis	1
4	Resources and its utilisation	
4.1	Basic concepts of Conventional and non-conventional energy	1
4.2	General idea about solar energy, Fuel cells	1
4.3	Wind energy, Small hydro plants, bio-fuels	1
4.4	Energy derived from oceans and Geothermal energy	1
5	Sustainability Practices	
5.1	Basic concept of sustainable habitat	1
5.2	Methods for increasing energy efficiency of buildings	1
5.3	Green Engineering	1
5.4	Sustainable Urbanisation, Sustainable cities, Sustainable transport	1



CODE	COURSE NAME	CATEGORY	L	Т	Р	CREDIT
			2	0	0	2
EST 200	DESIGN AND ENGINEERING					

### Preamble:

The purpose of this course is to

- i) introduce the undergraduate engineering studentsthe fundamental principles of design engineering,
- ii) make them understand the steps involved in the design process and
- iii) familiarize them with the basic tools used and approaches in design.

Students are expected to apply design thinking in learning as well as while practicing engineering, which is very important and relevant for today. Case studies from various practical situations will help the students realize that design is not only concerned about the function but also many other factors like customer requirements, economics, reliability, etc. along with a variety of life cycle issues.

The course will help students to consider aesthetics, ergonomics and sustainability factors in designs and also to practice professional ethics while designing.

# Prerequisite:

**Nil.**The course will be generic to all engineering disciplines and will not require specialized preparation or prerequisites in any of the individual engineering disciplines.

### **Course Outcomes:**

After the completion of the course the student will be able to

CO 1	Explain the different concepts and principles involved in design engineering.
0 2	Apply design thinking while learning and practicing engineering.
CO 3	Develop innovative, reliable, sustainable and economically viable designs
	incorporating knowledge in engineering.

# Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO	РО	PO
										10	11	12
CO 1	2	1					1			1		
CO 2		2				1		1				2
CO 3			2			1	1		2	2		1



### Assessment Pattern

# Continuous Internal Evaluation (CIE) Pattern:

Attendance : 10 marks
Continuous Assessment Test (2 numbers) : 25 marks

Assignment/Quiz/Course project : 15 marks

End Semester Examination (ESE) Pattern: There will be two parts; Part A and Part B.

Part A : 30 marks part B : 70 marks

Part A contains 10 questions with 2 questions from each module, having 3 marks for each question. Students should answer all questions.

Part B contains 2 case study questions from each module of which student should answer any one. Each question carry 14 marks and can have maximum 2 sub questions.

### Mark distribution

Total Marks	CIE	ESE	ESE Duration		
150	50	100	3 hours		

Bloom's Category	Continuous Ass	End Semester			
	1	2	Examination		
Remember	5	5	10		
Understand	10	10	20		
Apply	35	35	70		
Analyse	-	-	-		
Evaluate	- FA	- ·	-		
Create	-	-	-		

# **Course Level Assessment Questions**

Course Outcome 1 (CO1): Appreciate the different concepts and principles involved in design engineering.

- 1. State how engineering design is different from other kinds of design
- 2. List the different stages in a design process.
- 3. Describedesign thinking.
- 4. State the function of prototyping and proofing in engineering design.
- 5. Write notes on the following concepts in connection with design engineering 1) Modular Design,
- 2) Life Cycle Design , 3) Value Engineering, 4) Concurrent Engineering, and 5) Reverse Engineering
- 6. State design rights.

Course Outcome 2 (CO2) Apply design thinking while learning and practicing engineering.

- 1. Construct the iterative process for design thinking in developing simple products like a pen, umbrella, bag, etc.
- 2. Show with an example how divergent-convergent thinking helps in generating alternative designs and then how to narrow down to the best design.
- 3. Describe how a problem-based learning helps in creating better design engineering solutions.
- 4. Discuss as an engineer, how ethics play a decisive role in your designs

Course Outcome 3(CO3): Develop innovative, reliable, sustainable and economically viable designs incorporating different segments of knowledge in engineering.

- 1. Illustrate the development of any simple product by passing through the different stages of design process
- 2. Show the graphical design communication with the help of detailed 2D or 3D drawings for any simple product.
- 3. Describe how to develop new designs for simple products through bio-mimicry.

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# **Model Question paper**

Page 1 of 2

Reg No.:\_\_\_\_\_ Name:\_\_\_\_

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

THIRD/FOURTH SEMESTER B.TECH DEGREE EXAMINATION

Course Code: EST 200

Course Name: DESIGN AND ENGINEERING

Max. Marks: 100Duration: 3 Hours

PART A

Answer all questions, each question carries 3 marks
Use only hand sketches

- (1)Write about the basic design process.
- (2) Describe how to finalize the design objectives.
- (3) State the role of divergent-convergent questioning in design thinking.
- (4) Discuss how to perform design thinking in a team managing the conflicts.
- (5) Show how engineering sketches and drawings convey designs.
- (6) Explain the role of mathematics and physics in design engineering process.
- (7) Distinguish between project-based learning and problem-based learning in design engineering.
- (8) Describe how concepts like value engineering, concurrent engineering and reverse engineering influence engineering designs?
- (9) Show how designs are varied based on the aspects of production methods, life span, reliability and environment?
- (10) Explain how economics influence the engineering designs?

(10x3 marks = 30 marks)

### Part B

Answer any ONE question from each module. Each question carry 14 marks

### Module 1

(11) Show the designing of a wrist watch going through the various stages of the design process. Use hand sketches to illustrate the processes.

or

(12)Find the customer requirements for designing a new car showroom. Show how the design objectives were finalized considering the design constraints?

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Research Centre (Autonomous)

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### Module 2

(13)Illustrate the design thinking approach for designing a bag for college students within a limited budget. Describe each stage of the process and the iterative procedure involved. Use hand sketches to support your arguments.

10

(14)Construct a number of possible designs and then refine them to narrow down to the best design for a drug trolley used in hospitals. Show how the divergent-convergent thinking helps in the process. Provide your rationale for each step by using hand sketches only.

# Module 3

(15) Graphically communicate the design of a thermo flask used to keep hot coffee. Draw the detailed 2D drawings of the same with design detailing, material selection, scale drawings, dimensions, tolerances, etc. Use only hand sketches.

or

(16)Describe the role of mathematical modelling in design engineering. Show how mathematics and physics play a role in designing a lifting mechanism to raise 100 kg of weight to a floor at a height of 10 meters in a construction site.

### Module 4

(17) Show the development of a nature inspired design for a solar poweredbus waiting shed beside a highway. Relate between natural and man-made designs. Use hand sketches to support your arguments.

or

(18)Show the design of a simple sofa and then depict how the design changes when considering 1) aesthetics and 2) ergonomics into consideration. Give hand sketches and explanations to justify the changes in designs.

### Module 5

(19)Examine the changes in the design of a foot wear with constraints of 1) production methods, 2) life span requirement, 3) reliability issues and 4) environmental factors. Use hand sketches and give proper rationalization for the changes in design.

10

(20)Describe the how to estimate the cost of a particular design using ANY of the following: i) a website, ii) the layout of a plant, iii) the elevation of a building, iv) anelectrical or electronic system or device and v) a car.

Show how economics will influence the engineering designs. Use hand sketches to support your arguments.



Page 2 of 2

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Thiruvilwamala, Thrissur - 680588

(5x14 marks = 70 marks

# Syllabus

#### Module 1

<u>Design Process</u>:- Introduction to Design and Engineering Design, Defining a Design Process-:Detailing Customer Requirements, Setting Design Objectives, Identifying Constraints, Establishing Functions, Generating Design Alternatives and Choosing a Design.

### Module 2

<u>Design Thinking Approach:</u>-Introduction to Design Thinking, Iterative Design Thinking Process Stages: Empathize, Define, Ideate, Prototype and Test. Design Thinking as Divergent-Convergent Questioning. Design Thinking in a Team Environment.

### Module 3

<u>Design Communication</u> (Languages of Engineering Design):-Communicating Designs Graphically, Communicating Designs Orally and in Writing. Mathematical Modeling In Design, Prototyping and Proofing the Design.

### Module 4

<u>Design Engineering Concepts:</u>-Project-based Learning and Problem-based Learning in Design.Modular Design and Life Cycle Design Approaches. Application of Biomimicry, Aesthetics and Ergonomics in Design. Value Engineering, Concurrent Engineering, and Reverse Engineering in Design.

### Module 5

<u>Expediency</u>, <u>Economics and Environment in Design Engineering</u>:-Design for Production, Use, and Sustainability. Engineering Economics in Design Rights. Ethics in Design

### **Text Books**

- 1) YousefHaik, SangarappillaiSivaloganathan, Tamer M. Shahin, Engineering Design Process, Cengage Learning 2003, Third Edition, ISBN-10: 9781305253285,
- 2) Voland, G., Engineering by Design, Pearson India 2014, Second Edition, ISBN 9332535051

### Reference Books

- 1.Philip Kosky, Robert Balmer, William Keat, George Wise, Exploring Engineering, Fourth Edition: An Introduction to Engineering and Design, Academic Press 2015, 4th Edition, ISBN: 9780128012420.
- Clive L. Dym, Engineering Design: A Project-Based Introduction, John Wiley & Sons, New York 2009, Fourth Edition, ISBN: 978-1-118-32458-5
- 3. Nigel Cross, Design Thinking: Understanding How Designers Think and Work, Berg Publishers 2011, First Edition, ISBN: 978-1847886361
- 4. Pahl, G., Beitz, W., Feldhusen, J., Grote, K.-H., Engineering Design: A Systematic Approach, Springer 2007, Third Edition, ISBN 978-1-84628-319-2

# **Course Contents and Lecture Schedule**

No	Topic	No. of Lectures
1	Module 1: Design Process	
1.1	Introduction to Design and Engineering Design.	
	What does it mean to design something? How Is engineering design different from other kinds of design? Where and when do engineers design? What are the basic vocabularyin engineering design? How to learn and do engineering design.	1
1.2	Defining a Design Process-: Detailing Customer Requirements.	
	How to do engineering design? Illustrate the process with an example. How to identify the customer requirements of design?	1
1.3	Defining a Design Process-: Setting Design Objectives, Identifying Constraints, Establishing Functions.	
	How to finalize the design objectives? How to identify the design constraints? How to express the functions a design in engineering terms?	1
1.4	Defining a Design Process-: Generating Design Alternatives and Choosing a Design.	1
	How to generate or create feasible design alternatives?  How to identify the "best possible design"?	1
1.5	Case Studies:- Stages of Design Process.	
	Conduct exercises for designing simple products going through the different stages of design process.	1
2	Module 2: Design Thinking Approach	
2.1	Introduction to Design Thinking	
	How does the design thinking approach help engineers in creating innovative and efficient designs?	1
2.2	Iterative Design Thinking Process Stages: Empathize, Define, Ideate, Prototype and Test.	
	How can the engineers arrive at better designs utilizing the iterative design thinking process (in which knowledge acquired in the later stages can be applied back to the earlier stages)?	1
2.3	Design Thinking as Divergent-Convergent Questioning.	
	Describe how to create a number of possible designs and then how to refine and narrow down to the 'best design'.	1
2.4	Design Thinking in a Team Environment.	
	How to perform design thinking as a team managing the conflicts?	1
2.5	Case Studies: Design Thinking Approach.	1
	Conduct exercises using the design thinking approach for	- i

designing any simple products within a limited time and budget	
Module 3: Design Communication (Languages of Engineering	ng Design)
Communicating Designs Graphically.	1
Communicating Designs Orally and in Writing.	
presentation or technical reports efficiently?	i i
How do mathematics and physics become a part of the	1
Prototyping and Proofing the Design.	1
Case Studies: Communicating Designs Graphically.	
detailed 2D or 3D drawings of simple products with design detailing, material selection, scale drawings, dimensions, tolerances, etc.	1
Module 4: Design Engineering Concepts	
Project-based Learning and Problem-based Learning in Design.	1
How engineering students can learn design engineering through projects?  How students can take up problems to learn design engineering?	
Modular Design and Life Cycle Design Approaches.	1
What is modular approach in design engineering? How it helps?  How the life cycle design approach influences design decisions?	
Application of Bio-mimicry, Aesthetics and Ergonomics in Design.	1
How do aesthetics and ergonomics change engineering designs? How do the intelligence in nature inspire engineering designs? What are the common examples of bio-mimicry in engineering?	
Value Engineering, Concurrent Engineering, and Reverse Engineering in Design.	1
How do concepts like value engineering, concurrent engineering and reverse engineering influence	7
	1
Case Studies: Dio-Hilmiery based Designs.	fusikan
	Module 3: Design Communication (Languages of Engineerin Communicating Designs Graphically.  How do engineering sketches and drawings convey designs?  Communicating Designs Orally and in Writing.  How can a design be communicated through oral presentation or technical reports efficiently?  First Series Examination  Mathematical Modelling in Design.  How do mathematics and physics become a part of the design process?  Prototyping and Proofing the Design.  How to predict whether the design will function well or not?  Case Studies: Communicating Designs Graphically.  Conduct exercises for design communication through detailed 2D or 3D drawings of simple products with design detailing, material selection, scale drawings, dimensions, tolerances, etc.  Module 4: Design Engineering Concepts  Project-based Learning and Problem-based Learning in Design.  How engineering students can learn design engineering through projects?  How students can take up problems to learn design engineering?  Modular Design and Life Cycle Design Approaches.  What is modular approach in design engineering? How it helps?  How the life cycle design approach influences design decisions?  Application of Bio-mimicry, Aesthetics and Ergonomics in Design.  How do aesthetics and ergonomics change engineering designs? What are the common examples of bio-mimicry in engineering?  Value Engineering, Concurrent Engineering, and Reverse Engineering in Design.

	products using bio-mimicry and train students to bring out new nature inspired designs.	
5	Module 5: Expediency, Economics and Environment in Desig	n
	Engineering	
5.1	Design for Production, Use, and Sustainability.	1
	How designs are finalized based on the aspects of	
	production methods, life span, reliability and	
	environment?	
5.2	Engineering Economics in Design.	1
	How to estimate the cost of a particular design and how	
	will economics influence the engineering designs?	
5.3	Design Rights.	1
	What are design rights and how can an engineer put it	
	into practice?	
5.4	Ethics in Design.	1
	How do ethics play a decisive role in engineering design?	
5.5	Case Studies: Design for Production, Use, and	1
	Sustainability.	
	Conduct exercises using simple products to show how designs	
	change with constraints of production methods, life span	
	requirement, reliability issues and environmental factors.	
	Second Series Examination	5-1



Code.	Course Name	L	T	P	Hrs	Credit
HUT 200	Professional Ethics	2	0	0	2	2

**Preamble:** To enable students to create awareness on ethics and human values.

Prerequisite: Nil

Course Outcomes: After the completion of the course the student will be able to

CO 1	Understand the core values that shape the ethical behaviour of a professional.				
CO 2	Adopt a good character and follow an ethical life.				
CO 3	Explain the role and responsibility in technological development by keeping personal ethics and legal ethics.				
CO 4	Solve moral and ethical problems through exploration and assessment by established experiments.				
CO 5	Apply the knowledge of human values and social values to contemporary ethical values and global issues.				

# Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1
CO 1						/45 mg   8		2		48	2	
CO 2			i i i	4				2			2	
CO 3								3			2	
CO 4					-			3			2	
CO 5						= 0		3			2	

# **Assessment Pattern**

Bloom's category	Continuous Asses	End Semester Exam	
Diooni s category	1	2	End Semester Exam
Remember	15	15	30
Understood	20	20	40
Apply	15	15	30

# Mark distribution

Total Marks	CIE	ESE	ESE Duration
150	50	100	3 hours



### **Continuous Internal Evaluation Pattern:**

Attendance : 10 marks
Continuous Assessment Tests (2 Nos) : 25 marks
Assignments/Quiz : 15 marks

**End Semester Examination Pattern:** There will be two parts; Part A and Part B. Part A contains 10 questions with 2 questions from each module, having 3 marks for each question. Students should answer all questions. Part B contains 2 questions from each module of which student should answer any one. Each question can have maximum 2 sub-divisions and carry 14 marks.

# **Course Level Assessment Questions**

# Course Outcome 1 (CO1):

- 1. Define integrity and point out ethical values.
- 2. Describe the qualities required to live a peaceful life.
- 3. Explain the role of engineers in modern society.

# Course Outcome 2 (CO2)

- 1. Derive the codes of ethics.
- 2. Differentiate consensus and controversy.
- 3. Discuss in detail about character and confidence.

# Course Outcome 3(CO3):

- 1. Explain the role of professional's ethics in technological development.
- 2. Distinguish between self interest and conflicts of interest.
- 3. Review on industrial standards and legal ethics.

# Course Outcome 4 (CO4):

- 1. Illustrate the role of engineers as experimenters.
- 2. Interpret the terms safety and risk.
- 3. Show how the occupational crimes are resolved by keeping the rights of employees.

# Course Outcome 5 (CO5):

- 1. Exemplify the engineers as managers.
- 2. Investigate the causes and effects of acid rain with a case study.
- 3. Explorate the need of environmental ethics in technological development.



	Model Question paper	
QP CODE:		Reg No:
PAGES:3		Name :
	M TECHNOLOGICAL UNIVERSITY THIRD ECH DEGREE EXAMINATION, MONTH &	
Max. Marks: 100	Course Code: HUT 200 Course Name: PROFESSIONAL ETHICS  (2019-Scheme) PART A	Duration: 3 Hours
	(Answer all questions, each question carries 3	marks)
1. Define empathy a	and honesty.	
2. Briefly explain al	bout morals, values and ethics.	
3. Interpret the two	forms of self-respect.	
4. List out the mode	els of professional roles.	
5. Indicate the advan	ntages of using standards.	
6. Point out the cond	ditions required to define a valid consent?	
7. Identify the confl	icts of interests with an example?	
8. Recall confidentia	ality.	
9. Conclude the feat	tures of biometric ethics.	
10. Name any three p	professional societies and their role relevant to engi	neers.
		(10x3 = 30  marks)
	PART B	
(Answer one full	l question from each module, each question carr	ries 14 marks)

# MODULE I

11. a) Classify the relationship between ethical values and law?

b) Compare between caring and sharing.

(10+4 = 14 marks)

Or

12. a) Exemplify a comprehensive review about integrity and respect for others.

b) Discuss about co-operation and commitment.

(8+6 = 14 marks)

### MODULE II

- 13.a) Explain the three main levels of moral developments, deviced by Kohlberg.
  - b) Differentiate moral codes and optimal codes.

(10+4 = 14 marks)

Or

- 14. a) Extrapolate the duty ethics and right ethics.
  - b) Discuss in detail the three types of inquiries in engineering ethics

(8+6 = 14 marks)

# MODULE III

- 15.a) Summarize the following features of morally responsible engineers.
  - (i) Moral autonomy
- (ii) Accountability

b)Explain the rights of employees

(8+6 = 14 marks)

Or

- 16. a) Explain the reasons for Chernobyl mishap?
  - b) Describe the methods to improve collegiality and loyalty.

(8+6 = 14 marks)

# MODULE IV

- 17.a) Execute collegiality with respect to commitment, respect and connectedness.
  - b) Identify conflicts of interests with an example.

(8+6 = 14 marks)

Or

- 18. a) Explain in detail about professional rights and employee rights.
  - b) Exemplify engineers as managers.

# MODULE V

- 19.a) Evaluate the technology transfer and appropriate technology.
- b) Explain about computer and internet ethics.

(8+6 = 14 marks)

Or

- 20. a) Investigate the causes and effects of acid rain with a case study.
  - b) Conclude the features of ecocentric and biocentric ethics.

(8+6 = 14 marks)



# **Syllabus**

### Module 1 - Human Values.

Morals, values and Ethics – Integrity- Academic integrity-Work Ethics- Service Learning- Civic Virtue-Respect for others- Living peacefully- Caring and Sharing- Honestly- courage-Cooperation commitment-Empathy-Self Confidence -Social Expectations.

# Module 2 - Engineering Ethics & Professionalism.

Senses of Engineering Ethics - Variety of moral issues- Types of inquiry- Moral dilemmas –Moral Autonomy – Kohlberg's theory- Gilligan's theory- Consensus and Controversy-Profession and Professionalism- Models of professional roles-Theories about right action –Self interest-Customs and Religion- Uses of Ethical Theories.

# Module 3- Engineering as social Experimentation.

Engineering as Experimentation – Engineers as responsible Experimenters- Codes of Ethics- Plagiarism- A balanced outlook on law - Challenges case study- Bhopal gas tragedy.

# Module 4- Responsibilities and Rights.

Collegiality and loyalty – Managing conflict- Respect for authority- Collective bargaining- Confidentiality-Role of confidentiality in moral integrity-Conflicts of interest- Occupational crime- Professional rights-Employee right- IPR Discrimination.

### Module 5- Global Ethical Issues.

Multinational Corporations- Environmental Ethics- Business Ethics- Computer Ethics -Role in Technological Development-Engineers as Managers- Consulting Engineers- Engineers as Expert witnesses and advisors-Moral leadership.

# Text Book

- 1. M Govindarajan, S Natarajan and V S Senthil Kumar, Engineering Ethics, PHI Learning Private Ltd, New Delhi,2012.
- 2. R S Naagarazan, A text book on professional ethics and human values, New age international (P) limited ,New Delhi,2006.

# Reference Books

- 1. Mike W Martin and Roland Schinzinger, Ethics in Engineering,4<sup>th</sup> edition, Tata McGraw Hill Publishing Company Pvt Ltd, New Delhi,2014.
- 2. Charles D Fleddermann, Engineering Ethics, Pearson Education/ Prentice Hall of India, New Jersey, 2004.

3. Charles E Harris, Michael S Protchard and Michael J Rabins, Engineering Ethics- Concepts and cases, Wadsworth Thompson Learning, United states, 2005.

4. http://www.slideword.org/slidestag.aspx/human-values-and-Professional-ethics.

PRINCIPAL

# **Course Contents and Lecture Schedule**

Module 1 – Human Values.  1.1 Morals, values and Ethics, Integrity, Academic Integrity, Work Ethics 1.2 Service Learning, Civic Virtue, Respect for others, Living peacefully 1.3 Caring and Sharing, Honesty, Courage, Co-operation commitment 2. Empathy, Self Confidence, Social Expectations 2. Module 2- Engineering Ethics & Professionalism.  2.1 Senses of Engineering Ethics, Variety of moral issues, Types of inquiry 1.2 Moral dilemmas, Moral Autonomy, Kohlberg's theory 1.3 Gilligan's theory, Consensus and Controversy, Profession& Professionalism, Models of professional roles, Theories about right action 2.4 Self interest-Customs and Religion, Uses of Ethical Theories 1. Module 3- Engineering as social Experimentation. 3.1 Engineering as Experimentation, Engineers as responsible Experimenters 1. Codes of Ethics, Plagiarism, A balanced outlook on law 2. Codes of Ethics, Plagiarism, A balanced outlook on law 2. Challenger case study, Bhopal gas tragedy 2. Module 4- Responsibilities and Rights.  4.1 Collegiality and loyalty, Managing conflict, Respect for authority 4.2 Collective bargaining, Confidentiality, Role of confidentiality in moral integrity, Conflicts of interest 4.3 Discrimination 5 Module 5- Global Ethical Issues.  5.1 Multinational Corporations, Environmental Ethics, Business Ethics, Computer Ethics Computer Ethics Role in Technological Development, Moral leadership 5. Engineers as Managers, Consulting Engineers, Engineers as Expert witnesses and advisors	SL.N	Topic	No. of Lectures 25
1.2 Service Learning, Civic Virtue, Respect for others, Living peacefully 1.3 Caring and Sharing, Honesty, Courage, Co-operation commitment 2.1.4 Empathy, Self Confidence, Social Expectations 2 Module 2- Engineering Ethics & Professionalism.  2.1 Senses of Engineering Ethics, Variety of moral issues, Types of inquiry 2.2 Moral dilemmas, Moral Autonomy, Kohlberg's theory 2.3 Gilligan's theory, Consensus and Controversy, Profession& Professionalism, Models of professional roles, Theories about right action 2.4 Self interest-Customs and Religion, Uses of Ethical Theories 3 Module 3- Engineering as social Experimentation.  3.1 Engineering as Experimentation, Engineers as responsible Experimenters 3.2 Codes of Ethics, Plagiarism, A balanced outlook on law 2.3 Challenger case study, Bhopal gas tragedy 4 Module 4- Responsibilities and Rights.  4.1 Collegiality and loyalty, Managing conflict, Respect for authority 4.2 Collective bargaining, Confidentiality, Role of confidentiality in moral integrity, Conflicts of interest 4.3 Occupational crime, Professional rights, Employee right, IPR 5 Discrimination  5 Module 5- Global Ethical Issues.  5.1 Multinational Corporations, Environmental Ethics, Business Ethics, Computer Ethics 5.2 Role in Technological Development, Moral leadership 5 Engineers as Managers, Consulting Engineers, Engineers as Expert 5 Engineers as Managers, Consulting Engineers, Engineers as Expert		Module 1 – Human Values.	23
1.3 Caring and Sharing, Honesty, Courage, Co-operation commitment  1.4 Empathy, Self Confidence, Social Expectations  2 Module 2- Engineering Ethics & Professionalism.  2.1 Senses of Engineering Ethics, Variety of moral issues, Types of inquiry  1.2.2 Moral dilemmas, Moral Autonomy, Kohlberg's theory  1.3 Gilligan's theory, Consensus and Controversy, Profession& Professionalism, Models of professional roles, Theories about right action  2.4 Self interest-Customs and Religion, Uses of Ethical Theories  1.5 Module 3- Engineering as social Experimentation.  3.1 Engineering as Experimentation, Engineers as responsible Experimenters  3.2 Codes of Ethics, Plagiarism, A balanced outlook on law  2.3.3 Challenger case study, Bhopal gas tragedy  2.4 Module 4- Responsibilities and Rights.  4.1 Collegiality and loyalty, Managing conflict, Respect for authority  4.2 Collective bargaining, Confidentiality, Role of confidentiality in moral integrity, Conflicts of interest  4.3 Occupational crime, Professional rights, Employee right, IPR Discrimination  5 Module 5- Global Ethical Issues.  5.1 Multinational Corporations, Environmental Ethics, Business Ethics, Computer Ethics  5.2 Role in Technological Development, Moral leadership  1 Engineers as Managers, Consulting Engineers, Engineers as Expert  2	1.1	Morals, values and Ethics, Integrity, Academic Integrity, Work Ethics	1
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Module 4- Responsibilities and Rights.  4.1 Collegiality and loyalty, Managing conflict, Respect for authority  4.2 Collective bargaining, Confidentiality, Role of confidentiality in moral integrity, Conflicts of interest  4.3 Occupational crime, Professional rights, Employee right, IPR Discrimination  5 Module 5- Global Ethical Issues.  5.1 Multinational Corporations, Environmental Ethics, Business Ethics, Computer Ethics  5.2 Role in Technological Development, Moral leadership  5 Engineers as Managers, Consulting Engineers, Engineers as Expert  2	3.2	Codes of Ethics, Plagiarism, A balanced outlook on law	2
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Discrimination  Module 5- Global Ethical Issues.  Multinational Corporations, Environmental Ethics, Business Ethics, Computer Ethics  Role in Technological Development, Moral leadership  Engineers as Managers, Consulting Engineers, Engineers as Expert  Engineers as Managers, Consulting Engineers, Engineers as Expert	4.2		2
5.1 Multinational Corporations, Environmental Ethics, Business Ethics, Computer Ethics  5.2 Role in Technological Development, Moral leadership Engineers as Managers, Consulting Engineers, Engineers as Expert  2	4.3		2
5.1 Computer Ethics  5.2 Role in Technological Development, Moral leadership  Engineers as Managers, Consulting Engineers, Engineers as Expert  2	5	Module 5- Global Ethical Issues.	
Engineers as Managers, Consulting Engineers, Engineers as Expert	5.1		2
	5.2	Role in Technological Development, Moral leadership	1
	5.3		2



CODE	COURSE NAME	CATEGORY	L	Т	Р	CREDIT
MCN202	CONSTITUTION OF INDIA		2	0	0	NIL

# Preamble:

The study of their own country constitution and studying the importance environment as well as understanding their own human rights help the students to concentrate on their day to day discipline. It also gives the knowledge and strength to face the society and people.

Prerequisite: Nil

Course Outcomes: After the completion of the course the student will be able to

CO 1	Explain the background of the present constitution of India and features.
CO 2	Utilize the fundamental rights and duties.
CO 3	Understand the working of the union executive, parliament and judiciary.
CO 4	Understand the working of the state executive, legislature and judiciary.
CO 5	Utilize the special provisions and statutory institutions.
CO 6	Show national and patriotic spirit as responsible citizens of the country

# Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
					-		-		-	10	11	12
CO 1						2	2	2		2		
CO 2						3	3	3		3		
CO 3						3	2	3		3		
CO 4						3	2	3		3		
CO 5						3	2	3		3		
CO 6						3	3	3		2		

# **Assessment Pattern**

Bloom's Category	Continuous Tests	Assessment	End Semo	ester Examination
	1	2		
Remember	20	20	40	11
Understand	20	20	40	4
Apply	10	10	20	(a fuonan
Analyse				7

Evaluate		
Create		

### Mark distribution

Total Marks	CIE	ESE	ESE Duration		
150	50	100	3 hours		

# **Continuous Internal Evaluation Pattern:**

Attendance : 10 marks
Continuous Assessment Test (2 numbers) : 25 marks
Assignment/Quiz/Course project : 15 marks

End Semester Examination Pattern: There will be two parts; Part A and Part B. Part A contain 10 questions with 2 questions from each module, having 3 marks for each question. Students should answer all questions. Part B contains 2 questions from each module of which student should answer any one. Each question can have maximum 2 sub-divisions and carry 14 marks.

### **Course Level Assessment Questions**

# Course Outcome 1 (CO1):

- 1 Discuss the historical background of the Indian constitution.
- 2 Explain the salient features of the Indian constitution.
- 3 Discuss the importance of preamble in the implementation of constitution.

# Course Outcome 2 (CO2)

- 1 What are fundamental rights? Examine each of them.
- 2 Examine the scope of freedom of speech and expression underlying the constitution.
- 3 The thumb impression of an accused is taken by the police against his will. He contends that this is a violation of his rights under Art 20(3) of the constitution. Decide.

# Course Outcome 3(CO3):

1 Explain the powers of the President to suspend the fundamental rights during emergency

- 2 Explain the salient features of appeal by special leave.
- 3. List the constitutional powers of President.

# Course Outcome 4 (CO4):

- 1 Discuss the constitutional powers of Governor.
- 2 Examine the writ jurisdiction of High court.
- 3 Discuss the qualification and disqualification of membership of state legislature.

# Course Outcome 5 (CO5):

- 1 Discuss the duties and powers of comptroller of auditor general.
- 2 Discuss the proclamation of emergency.
- 3 A state levies tax on motor vehicles used in the state, for the purpose of maintaining roads in the state. X challenges the levy of the tax on the ground that it violates the freedom of interstate commerce guaranteed under Art 301. Decide.

# Course Outcome 6 (CO6):

- 1 Explain the advantages of citizenship.
- 2 List the important principles contained in the directive principles of state policy.
- 3 Discuss the various aspects contained in the preamble of the constitution

# Model Question paper

# PART A

(Answer all questions. Each question carries 3 marks)

- 1 Define and explain the term constitution.
- 2 Explain the need and importance of Preamble.
- 3 What is directive principle of state policy?
- 4 Define the State.
- 5 List the functions of Attorney general of India.

- 6 Explain the review power of Supreme court.
- 7 List the qualifications of Governor.
- 8 Explain the term and removal of Judges in High court.
- 9 Explain the powers of public service commission.
- 10 List three types of emergency under Indian constitution.

(10X3=30marks)

### PART B

(Answer on question from each module. Each question carries 14 marks)

### Module 1

- 11 Discuss the various methods of acquiring Indian citizenship.
- 12 Examine the salient features of the Indian constitution.

### Module 2

- 13 A high court passes a judgement against X. X desires to file a writ petition in the supreme court under Art32, on the ground that the judgement violates his fundamental rights.

  Advise him whether he can do so.
- 14 What is meant by directive principles of State policy? List the directives.

# Module3

- 15 Describe the procedure of election and removal of the President of India.
- 16 Supreme court may in its discretion grant special leave to appeal. Examine the situation.

# Module 4

- 17 Discuss the powers of Governor.
- 18 X filed a writ petition under Art 226 which was dismissed. Subsequently, he filed a writ

petition under Art 32 of the constitution, seeking the same remedy. The Government

argued that the writ petition should be dismissed, on the ground of res judicata. Decide.

Module 5

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- 19 Examine the scope of the financial relations between the union and the states.
- 20 Discuss the effects of proclamation of emergency.

(14X5=70marks)

# Syllabus

- Module 1 Definition, historical back ground, features, preamble, territory, citizenship.
- Module 2 State, fundamental rights, directive principles, duties.
- Module 3 The machinery of the union government.
- Module 4 Government machinery in the states
- Module 5 The federal system, Statutory Institutions, miscellaneous provisions.

### **Text Books**

- 1 D D Basu, Introduction to the constitution of India, Lexis Nexis, New Delhi, 24e, 2019
- 2 PM Bhakshi, The constitution of India, Universal Law, 14e, 2017

# **Reference Books**

- 1 Ministry of law and justice, The constitution of India, Govt of India, New Delhi, 2019.
- 2 JN Pandey, The constitutional law of India, Central Law agency, Allahabad, 51e, 2019
- 3 MV Pylee, India's Constitution, S Chand and company, New Delhi, 16e, 2016

# **Course Contents and Lecture Schedule**

No	Topic	No. of Lectures
1	Module 1	
1.1	Definition of constitution, historical back ground, salient features of the constitution.	1
1.2	Preamble of the constitution, union and its territory.	1
1.3	Meaning of citizenship, types, termination of citizenship.	2
2	Module 2	
2.1	Definition of state fundamental violate general nature	2-

Definition of state, fundamental rights, general nature, classification, right to equality ,right to freedom , right against exploitation

2.2	Right to freedom of religion, cultural and educational rights, right	2
	to constitutional remedies. Protection in respect of conviction for	
	offences.	
2.3	Directive principles of state policy, classification of directives,	2
	fundamental duties.	
3	Module 3	•
3.1	The Union executive, the President, the vice President, the	2
	council of ministers, the Prime minister, Attorney-General,	
	functions.	
3.2	The parliament, composition, Rajya sabha, Lok sabha,	2
	qualification and disqualification of membership, functions of	
	parliament.	
3.3	Union judiciary, the supreme court, jurisdiction, appeal by special	1
	leave.	
4	Module 4	
4.1	The State executive, the Governor, the council of ministers, the	2
	Chief minister, advocate general, union Territories.	
4.2	The State Legislature, composition, qualification and	2
	disqualification of membership, functions.	
4.3	The state judiciary, the high court, jurisdiction, writs jurisdiction.	1
5	Module 5	
5.1	Relations between the Union and the States, legislative relation,	1
	administrative relation, financial Relations, Inter State council,	
	finance commission.	
5.2	Emergency provision, freedom of trade commerce and inter	2
	course, comptroller and auditor general of India, public Services,	
	public service commission, administrative Tribunals.	
5.3	Official language, elections, special provisions relating to certain	2
	classes, amendment of the Constitution.	



HUN	PROFESSIONAL COMMUNICATION	CATEGORY	L	T	Р	CREDIT
102		MNC	2	0	2	

**Preamble:** Clear, precise, and effective communication has become a *sine qua non* in today's information-driven world given its interdependencies and seamless connectivity. Any aspiring professional cannot but master the key elements of such communication. The objective of this course is to equip students with the necessary skills to listen, read, write, and speak so as to comprehend and successfully convey any idea, technical or otherwise, as well as give them the necessary polish to become persuasive communicators.

Prerequisite: None

Course Outcomes: After the completion of the course the student will be able to

CO 1	Develop vocabulary and language skills relevant to engineering as a profession
CO 2	Analyze, interpret and effectively summarize a variety of textual content
CO 3	Create effective technical presentations
CO 4	Discuss a given technical/non-technical topic in a group setting and arrive at generalizations/consensus
CO 5	Identify drawbacks in listening patterns and apply listening techniques for specific needs
CO 6	Create professional and technical documents that are clear and adhering to all the necessary conventions

# Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO	PO	PO
										10	11	12
CO 1										3		2
CO 2										1		3
CO 3						1			1	3		
CO 4						Single 1	10.5			3		1
CO 5		1				W	100		2	3		
CO 6	1					1			1	3		1

### Mark distribution

Total Marks	CIE	ESE	ESE Duration
100	50	50	2 hours

Mite Gardens
Pass Sty

#### **Continuous Internal Evaluation**

Total Marks: 50

Attendance : 10 marks
Regular assessment : 25 marks

Series test (one test only, should include verbal aptitude for placement and higher studies, this test

will be conducted for 50 marks and reduced to 15)

: 15 marks

Regular assessment

Project report presentation and Technical presentation through PPT : 7.5 marks
Listening Test : 5 marks
Group discussion/mock job interview : 7.5 marks
Resume submission : 5 marks

End Semester Examination Total Marks: 50, Time: 2 hrs.

# **Course Level Assessment Questions**

# Course Outcome 1 (CO1):

1. List down the ways in which gestures affect verbal communication.

2. Match the words and meanings

Ambiguous

promotion

Bona fide

referring to whole

Holistic

not clear

Exaltation

genuine

1. Read the passage below and prepare notes:

**3.** Expand the following Compound Nouns - a. Water supply. b. Object recognition. c. Steam turbine

Course Outcome 2 (CO2)

Mathematics, rightly viewed, possesses not only truth, but supreme beauty—a beauty cold and austere, like that of sculpture, without appeal to any part of our weaker nature, without the gorgeous trappings of painting or music, yet sublimely pure, and capable of a stern perfection such as only the greatest art can show. The true spirit of delight, the exaltation, the sense of being more than man, which is the touchstone of the highest excellence, is to be found in mathematics as surely as in poetry. What is best in mathematics deserves not merely to be learnt as a task, but to be assimilated as a part of daily thought, and brought again and again before the mind with ever-renewed encouragement. Real life is, to most men, a long second-best, a perpetual compromise between the ideal and the possible; but the world of pure reason knows no compromise, no practical limitations, no barrier to the creative activity embodying in splendid edifices the passionate aspiration after the perfect from which all great work springs. Remote from human passions, remote even from the pitiful facts of nature, the generations have gradually created an ordered cosmos, where pure thought can dwell as in its natural home, and where one, at least, of our nobler impulses can escape from the dreary exile of the actual world.

So little, however, have mathematicians aimed at beauty, that hardly anything in their work has had this conscious purpose. Much, owing to irrepressible instincts, which were better than avowed

PRINCIPAL

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beliefs, has been moulded by an unconscious taste; but much also has been spoilt by false notions of what was fitting. The characteristic excellence of mathematics is only to be found where the reasoning is rigidly logical: the rules of logic are to mathematics what those of structure are to architecture. In the most beautiful work, a chain of argument is presented in which every link is important on its own account, in which there is an air of ease and lucidity throughout, and the premises achieve more than would have been thought possible, by means which appear natural and inevitable. Literature embodies what is general in particular circumstances whose universal significance shines through their individual dress; but mathematics endeavours to present whatever is most general in its purity, without any irrelevant trappings.

How should the teaching of mathematics be conducted so as to communicate to the learner as much as possible of this high ideal? Here experience must, in a great measure, be our quide; but some maxims may result from our consideration of the ultimate purpose to be achieved.

- From "On the teaching of mathematics" Bertrand Russell
- 2. Enumerate the advantages and disadvantages of speed reading. Discuss how it can impact comprehension.

# Course Outcome 3(CO3):

- 1. What are the key elements of a successful presentation?
- 2. Elucidate the importance of non-verbal communication in making a presentation
- 3. List out the key components in a technical presentation.

### Course Outcome 4 (CO4):

- 1. Discuss: 'In today's world, being a good listener is more important than being a good Speaker.'
- 2. Listen to a video/live group discussion on a particular topic, and prepare a brief summary of the proceedings.
- 3. List the do's and don'ts in a group discussion.

### Course Outcome 5 (CO5):

- 1. Watch a movie clip and write the subtitles for the dialogue.
- 2. What do you mean by barriers to effective listening? List ways to overcome each of these.
- 3. What are the different types of interviews? How are listening skills particularly important in Skype/telephonic interviews?

### Course Outcome 6 (CO6):

- 1. Explain the basic structure of a technical report.
- 2. You have been offered an internship in a much sought-after aerospace company and are very excited about it. However, the dates clash with your series tests. Write a letter to the Manager - University Relations of the company asking them if they can change the dates to coincide with your vacation.
- 3. You work in a well-reputed aerospace company as Manager University Relations. You are in charge of offering internships. A student has sent you a letter requesting you to change the dates allotted to him since he has series exams at that time. But there are no vacancies available during the period he has requested for. Compose an e-mail informing him of this and suggest that he try to arrange the matter with his college.

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### Syllabus

### Module 1

Use of language in communication: Significance of technical communication Vocabulary Development: technical vocabulary, vocabulary used in formal letters/emails and reports, sequence words, misspelled words, compound words, finding suitable synonyms, paraphrasing, verbal analogies. Language Development: subject-verb agreement, personal passive voice, numerical adjectives, embedded sentences, clauses, conditionals, reported speech, active/passive voice.

Technology-based communication: Effective email messages, slide presentations, editing skills using software. Modern day research and study skills: search engines, repositories, forums such as Git Hub, Stack Exchange, OSS communities (MOOC, SWAYAM, NPTEL), and Quora; Plagiarism

#### Module 2

Reading, Comprehension, and Summarizing: Reading styles, speed, valuation, critical reading, reading and comprehending shorter and longer technical articles from journals, newspapers, identifying the various transitions in a text, SQ3R method, PQRST method, speed reading. Comprehension: techniques, understanding textbooks, marking and underlining, Note-taking: recognizing non-verbal cues.

#### Module 3

Oral Presentation: Voice modulation, tone, describing a process, Presentation Skills: Oral presentation and public speaking skills, business presentations, Preparation: organizing the material, self-Introduction, introducing the topic, answering questions, individual presentation practice, presenting visuals effectively.

Debate and Group Discussions: introduction to Group Discussion (GD), differences between GD and debate; participating GD, understanding GD, brainstorming the topic, questioning and clarifying, GD strategies, activities to improve GD skills

# Module 4

Listening and Interview Skills Listening: Active and Passive listening, listening: for general content, to fill up information, intensive listening, for specific information, to answer, and to understand. Developing effective listening skills, barriers to effective listening, listening to longer technical talks, listening to classroom lectures, talks on engineering /technology, listening to documentaries and making notes, TED talks.

Interview Skills: types of interviews, successful interviews, interview etiquette, dress code, body language, telephone/online (skype) interviews, one-to-one interview & panel interview, FAQs related to job interviews

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#### Module 5

Formal writing: Technical Writing: differences between technical and literary style. Letter Writing (formal, informal and semi formal), Job applications, Minute preparation, CV preparation (differences between Bio-Data, CV and Resume), and Reports. Elements of style, Common Errors in Writing: describing a process, use of sequence words, Statements of Purpose, Instructions, Checklists.

Analytical and issue-based Essays and Report Writing: basics of report writing; Referencing Style (IEEE Format), structure of a report; types of reports, references, bibliography.

#### Lab Activities

Written: Letter writing, CV writing, Attending a meeting and Minute Preparation, Vocabulary Building

**Spoken:** Phonetics, MMFS (Multimedia Feedback System), Mirroring, Elevator Pitch, telephone etiquette, qualities of a good presentation with emphasis on body language and use of visual aids.

**Listening**: Exercises based on audio materials like radio and podcasts. Listening to Song. practice and exercises.

Reading: Speed Reading, Reading with the help of Audio Visual Aids, Reading Comprehension Skills Mock interview and Debate/Group Discussion: concepts, types, Do's and don'ts- intensive practice

#### Reference Books

- 1. English for Engineers and Technologists (Combined edition, Vol. 1 and 2), Orient Blackswan 2010.
- 2. Meenakshi Raman and Sangeetha Sharma,"Technical Communication: Principles and Practice", 2nd Edition, Oxford University Press, 2011
- 3. Stephen E. Lucas, "The Art of Public Speaking", 10<sup>th</sup> Edition; McGraw Hill Education, 2012.
- 4. Ashraf Rizvi, "Effective Technical Communication", 2<sup>nd</sup> Edition, McGraw Hill Education, 2017.
- 5. William Strunk Jr. & E.B. White, "The Elements of Style", 4<sup>th</sup> Edition, Pearson, 1999.
- 6. David F. Beer and David McMurrey, Guide to writing as an Engineer, John Willey. New York, 2004.
- 7. Goodheart-Willcox, "Professional Communication", First Edition, 2017.
- 8. Training in Interpersonal Skills: Tips for Managing People at Work, Pearson Education, India, 6 edition, 2015.
- The Ace of Soft Skills: Attitude, Communication and Etiquette for Success, Pearson Education; 1 edition, 2013.
- 10. Anand Ganguly, "Success in Interview", RPH, 5th Edition, 2016.
- 11. Raman Sharma, "Technical Communications", Oxford Publication, London, 2004.

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		CATEGORY	L	T	Р	CREDIT	YEAR	OF
HUN	LIFE SKILLS						INTRODUC	TION
101		MNC	2	0	2		2019	

Preamble: Life skills are those competencies that provide the means for an individual to be resourceful and positive while taking on life's vicissitudes. Development of one's personality by being aware of the self, connecting with others, reflecting on the abstract and the concrete, leading and generating change, and staying rooted in time-tested values and principles is being aimed at. This course is designed to enhance the employability and maximize the potential of the students by introducing them to the principles that underly personal and professional success, and help them acquire the skills needed to apply these principles in their lives and careers.

Prerequisite: None

Course Outcomes: After the completion of the course the student will be able to

CO 1	Define and Identify different life skills required in personal and professional life
CO 2	Develop an awareness of the self and apply well-defined techniques to cope with emotions and stress.
CO 3	Explain the basic mechanics of effective communication and demonstrate these through presentations.
CO 4	Take part in group discussions
CO 5	Use appropriate thinking and problem solving techniques to solve new problems
CO 6	Understand the basics of teamwork and leadership

### Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO 1					-	2		1	2	2	1	3
CO 2									3			2
CO 3						1			1	3		
CO 4										3		1
CO 5		3	2	1								
CO 6						1			3			

# Mark distribution

Total Marks	CIE	ESE	ESE Duration		
100	50	50	2 hours		

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### **Continuous Internal Evaluation**

Total Marks: 50

Attendance : 10 marks
Regular assessment : 15 marks
Series test (one test only, should include first three modules) : 25 marks

### Regular assessment

➤ Group Discussion (Marks: 9)

Create groups of about 6 students each and engage them on a GD on a suitable topic for about 20 minutes. Parameters to be used for evaluation are as follows:

Communication Skills : 3 marks
 Subject Clarity : 2 marks
 Group Dynamics : 2 marks
 Behaviours & Mannerisms : 2 marks

#### Presentation Skills (Marks: 6)

Identify a suitable topic and ask the students to prepare a presentation (preferably a power point presentation) for about 10 minutes. Parameters to be used for evaluation are as follows:

Communication Skills : 2 marks
 Platform Skills : 2 marks
 Subject Clarity/Knowledge : 2 marks

# **End Semester Examination**

Total Marks: 50 Time: 2 hrs.

# Part A: Short answer question (25 marks)

There will be one question from each MODULE (five questions in total, five marks each). Each question should be written in about maximum of 400 words. Parameters to be used for evaluation are as follows:

- (i) Content Clarity/Subject Knowledge
- (ii) Presentation style
- (iii) Organization of content

### Part B: Case Study (25 marks)

The students will be given a case study with questions at the end. The students have to analyze the case and answer the question at the end. Parameters to be used for evaluation are as follows:

- (i) Analyze the case situation
- (ii) Key players/characters of the case
- (iii) Identification of the problem (both major & minor if exists)
- (iv) Bring out alternatives
- (v) Analyze each alternative against the problem
- (vi) Choose the best alternative
- (vii) Implement as solution

(viii) Conclusion

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### Course Level Assessment Questions

### Course Outcome 1 (CO1):

- 1. List 'life skills' as identified by WHO
- 2. What do you mean by effective communication?
- 3. What are the essential life skills required by a professional?

# Course Outcome 2 (CO2)

- 1. Identify an effective means to deal with workplace stress.
- 2. How can a student apply journaling to stress management?
- 3. What is the PATH method? Describe a situation where this method can be used effectively.

### Course Outcome 3(CO3):

- Identify the communication network structure that can be observed in the given situations.
   Describe them.
  - (a) A group discussion on development.
  - (b) An address from the Principal regarding punctuality.
  - (c) A reporter interviewing a movie star.
  - (d) Discussing the answers of a test with a group of friends.
- 2. Elucidate the importance of non-verbal communication in making a presentation
- 3. Differentiate between kinesics, proxemics, and chronemics with examples.

# Course Outcome 4 (CO4):

- 1. How can a participant conclude a group discussion effectively?
- 2. 'Listening skills are essential for effectively participating in a group discussion.' Do you agree? Substantiate your answer.

# Course Outcome 5 (CO5):

- 1. Illustrate the creative thinking process with the help of a suitable example
- 2. Translate the following problem from verbal to graphic form and find the solution: In a quiz, Ananth has 50 points more than Bimal, Chinmay has 60 points less than Ananth, and Dharini is 20 points ahead of Chinmay. What is the difference in points between Bimal and Dharini?

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3. List at least five ways in which the problem "How to increase profit?" can be redefined

### Course Outcome 6 (CO6):

- A group of engineers decided to brainstorm a design issue on a new product. Since no one
  wanted to disagree with the senior members, new ideas were not flowing freely. What
  group dynamics technique would you suggest to avoid this 'groupthink'? Explain the
  procedure.
- 2. "A group focuses on individual contribution, while a team must focus on synergy." Explain.
- 3. Identify the type of group formed / constituted in each of the given situations
  - a) A Police Inspector with subordinates reporting to him
  - b) An enquiry committee constituted to investigate a specific incident
  - c) The Accounts Department of a company
  - d) A group of book lovers who meet to talk about reading

### Syllabus

#### Module 1

Overview of Life Skills: Meaning and significance of life skills, Life skills identified by WHO: Self-awareness, Empathy, Critical thinking, Creative thinking, Decision making, problem solving, Effective communication, interpersonal relationship, coping with stress, coping with emotion.

Life skills for professionals: positive thinking, right attitude, attention to detail, having the big picture, learning skills, research skills, perseverance, setting goals and achieving them, helping others, leadership, motivation, self-motivation, and motivating others, personality development, IQ, EQ, and SQ

### Module 2

Self-awareness: definition, need for self-awareness; Coping With Stress and Emotions, Human Values, tools and techniques of SA: questionnaires, journaling, reflective questions, meditation, mindfulness, psychometric tests, feedback.

Stress Management: Stress, reasons and effects, identifying stress, stress diaries, the four A's of stress management, techniques, Approaches: action-oriented, emotion-oriented, acceptance-oriented, resilience, Gratitude Training,

Coping with emotions: Identifying and managing emotions, harmful ways of dealing with emotions, PATH method and relaxation techniques.

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Morals, Values and Ethics: Integrity, Civic Virtue, Respect for Others, Living Peacefully, Caring, Sharing, Honesty, Courage, Valuing Time, Time management, Co operation, Commitment, Empathy, Self-Confidence, Character, Spirituality, Avoiding Procrastination, Sense of Engineering Ethics.

#### Module 3

21st century skills: Creativity, Critical Thinking, Collaboration, Problem Solving, Decision Making, Need for Creativity in the 21st century, Imagination, Intuition, Experience, Sources of Creativity, Lateral Thinking, Myths of creativity, Critical thinking Vs Creative thinking, Functions of Left Brain & Right brain, Convergent & Divergent Thinking, Critical reading & Multiple Intelligence.

Steps in problem solving: Problem Solving Techniques, Six Thinking Hats, Mind Mapping, Forced Connections. Analytical Thinking, Numeric, symbolic, and graphic reasoning. Scientific temperament and Logical thinking.

#### Module 4

Group and Team Dynamics: Introduction to Groups: Composition, formation, Cycle, thinking, Clarifying expectations, Problem Solving, Consensus, Dynamics techniques, Group vs Team, Team Dynamics, Virtual Teams. Managing team performance and managing conflicts, Intrapreneurship.

#### Module 5

Leadership: Leadership framework, entrepreneurial and moral leadership, vision, cultural dimensions. Growing as a leader, turnaround leadership, managing diverse stakeholders, crisis management. Types of Leadership, Traits, Styles, VUCA Leadership, Levels of Leadership, Transactional vs Transformational Leaders, Leadership Grid, Effective Leaders.

#### Lab Activities

#### Verbal

Effective communication and Presentation skills.

Different kinds of communication; Flow of communication; Communication networks, Types of barriers; Miscommunication

Introduction to presentations and group discussions.

Learning styles: visual, aural, verbal, kinaesthetic, logical, social, solitary; Previewing, KWL table, active listening, REAP method

Note-taking skills: outlining, non-linear note-taking methods, Cornell notes, three column note taking.

Memory techniques: mnemonics, association, flashcards, keywords, outlines, spider diagrams and mind maps, spaced repetition.

Time management: auditing, identifying time wasters, managing distractions, calendars and checklists; Prioritizing - Goal setting, SMART goals; Productivity tools and apps, Pomodoro technique.

#### Non Verbal:

Non-verbal Communication and Body Language: Forms of non-verbal communication; Interpreting body-language cues; Kinesics; Proxemics; Chronemics; Effective use of body language, Communication in a multi cultural environment.

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#### Reference Books

- 1. Shiv Khera, You Can Win, Macmillan Books, New York, 2003.
- 2. Barun K. Mitra, "Personality Development & Soft Skills", Oxford Publishers, Third impression, 2017.
- 3. ICT Academy of Kerala, "Life Skills for Engineers", McGraw Hill Education (India) Private Ltd., 2016.
- 4. Caruso, D. R. and Salovey P, "The Emotionally Intelligent Manager: How to Develop and Use the Four Key Emotional Skills of Leadership", John Wiley & Sons, 2004.
- 5. Kalyana, "Soft Skill for Managers"; First Edition; Wiley Publishing Ltd, 2015.
- 6. Larry James, "The First Book of Life Skills"; First Edition, Embassy Books, 2016.
- 7. Shalini Verma, "Development of Life Skills and Professional Practice"; First Edition; Sultan Chand (G/L) & Company, 2014.
- 8. Daniel Goleman, "Emotional Intelligence"; Bantam, 2006.
- 9. Remesh S., Vishnu R.G., "Life Skills for Engineers", Ridhima Publications, First Edition, 2016.
- 10. Butterfield Jeff, "Soft Skills for Everyone", Cengage Learning India Pvt Ltd; 1 edition, 2011.
- 11. Training in Interpersonal Skills: Tips for Managing People at Work, Pearson Education, India; 6 edition, 2015.
- 12. The Ace of Soft Skills: Attitude, Communication and Etiquette for Success, Pearson Education; 1 edition, 2013.

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MCN 301	DISASTER	Category	L	Т	P	CREDIT	YEAR OF INTRODUCTION
	MANAGEMENT	Non - Credit	2	0	0	Nil	2019

**Preamble**: The objective of this course is to introduce the fundamental concepts of hazards and disaster management.

Prerequisite: Nil

Course Outcomes: After the completion of the course the student will be able to

CO1	Define and use various terminologies in use in disaster management parlance and organise each of these terms in relation to the disaster management cycle (Cognitive knowledge level: <b>Understand</b> ).
CO2	Distinguish between different hazard types and vulnerability types and do vulnerability assessment (Cognitive knowledge level: Understand).
СОЗ	Identify the components and describe the process of risk assessment, and apply appropriate methodologies to assess risk (Cognitive knowledge level: Understand).
CO4	Explain the core elements and phases of Disaster Risk Management and develop possible measures to reduce disaster risks across sector and community (Cognitive knowledge level: Apply)
CO5	Identify factors that determine the nature of disaster response and discuss the various disaster response actions (Cognitive knowledge level: <b>Understand</b> ).
CO6	Explain the various legislations and best practices for disaster management and risk reduction at national and international level (Cognitive knowledge level: Understand).



# Mapping of course outcomes with program outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO 9	PO1 0	PO1	PO1 2
CO1		2				2				2		2
CO2	2	3	2		2	2	3			3		2
CO3	2	3	2	2	2	2	3			3		2
CO4	3	3	3		2	2	3					2
CO5	3	3			2	2	3					2
CO6	3					2	3	3				2

de E	Abstract POs defined by National Board of Accreditation					
PO#	Broad PO	PO#	Broad PO			
PO1	Engineering Knowledge	PO7	Environment and Sustainability			
PO2	Problem Analysis	PO8	Ethics			
PO3	Design/Development of solutions	PO9	Individual and team work			
PO4	Conduct investigations of complex problems	PO10	Communication			
PO5	Modern tool usage	PO11	Project Management and Finance			
PO6	The Engineer and Society	PO12	Life long learning			



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#### **Assessment Pattern**

Bloom's Category	Continuous A	ssessment Tests	End Semester
	Test 1 (Marks)	Test 2 (Marks)	Examination Marks
Remember	10	10	20
Understand	25	25	50
Apply	15	15	30
Analyze			
Evaluate			
Create			

#### Mark Distribution

Total Marks	CIE Marks	ESE Marks	ESE Duration
150	50	100	3 hours

#### Continuous Internal Evaluation Pattern:

Attendance : 10 marks

Continuous Assessment - Test : 25 marks

Continuous Assessment - Assignment : 15 marks

#### **Internal Examination Pattern:**

Each of the two internal examinations has to be conducted out of 50 marks. First series test shall be preferably conducted after completing the first half of the syllabus and the second series test shall be preferably conducted after completing remaining part of the syllabus. There will be two parts: Part A and Part B. Part A contains 5 questions (preferably, 2 questions each from the completed modules and 1 question from the partly completed module), having 3 marks for each

question adding up to 15 marks for part A. Students should answer all questions from Part A.

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Part B contains 7 questions (preferably, 3 questions each from the completed modules and 1 question from the partly completed module), each with 7 marks. Out of the 7 questions, a student should answer any 5.

#### **End Semester Examination Pattern:**

There will be two parts; Part A and Part B. Part A contains 10 questions with 2 questions from each module, having 3 marks for each question. Students should answer all questions. Part B contains 2 questions from each module of which a student should answer any one. Each question can have maximum 2 sub-divisions and carries 14 marks.



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#### **SYLLABUS**

#### MCN 301 Disaster Management

#### Module 1

Systems of earth

Lithosphere- composition, rocks, soils; Atmosphere-layers, ozone layer, greenhouse effect, weather, cyclones, atmospheric circulations, Indian Monsoon; hydrosphere- Oceans, inland water bodies; biosphere

Definition and meaning of key terms in Disaster Risk Reduction and Management- disaster, hazard, exposure, vulnerability, risk, risk assessment, risk mapping, capacity, resilience, disaster risk reduction, disaster risk management, early warning systems, disaster preparedness, disaster prevention, disaster mitigation, disaster response, damage assessment, crisis counselling, needs assessment.

#### Module 2

Hazard types and hazard mapping; Vulnerability types and their assessment- physical, social, economic and environmental vulnerability.

Disaster risk assessment –approaches, procedures

#### Module 3

Disaster risk management -Core elements and phases of Disaster Risk Management

Measures for Disaster Risk Reduction - prevention, mitigation, and preparedness.

Disaster response- objectives, requirements; response planning; types of responses.

Relief; international relief organizations.

#### Module 4

Participatory stakeholder engagement; Disaster communication- importance, methods, barriers; Crisis counselling

Capacity Building: Concept - Structural and Non-structural Measures, Capacity Assessment;

Strengthening Capacity for Reducing Risk

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#### Module 5

Common disaster types in India; Legislations in India on disaster management; National disaster management policy; Institutional arrangements for disaster management in India.

The Sendai Framework for Disaster Risk Reduction- targets, priorities for action, guiding principles

#### Reference Text Book

- 1. R. Subramanian, Disaster Management, Vikas Publishing House, 2018
- 2. M. M. Sulphey, Disaster Management, PHI Learning, 2016
- 3. UNDP, Disaster Risk Management Training Manual, 2016
- 4. United Nations Office for Disaster Risk Reduction, Sendai Framework for Disaster Risk Reduction 2015-2030, 2015

#### Sample Course Level Assessment Questions

#### Course Outcome 1 (CO1):

- What is the mechanism by which stratospheric ozone protects earth from harmful UV rays?
- 2. What are disasters? What are their causes?
- 3. Explain the different types of cyclones and the mechanism of their formation
- 4. Explain with examples, the difference between hazard and risk in the context of disaster management
- 5. Explain the following terms in the context of disaster management (a) exposure (b) resilience (c) disaster risk management (d) early warning systems, (e) damage assessment (f) crisis counselling (g) needs assessment

#### Course Outcome 2 (CO2):

- 1. What is hazard mapping? What are its objectives?
- 2. What is participatory hazard mapping? How is it conducted? What are its advantages?
- 3. Explain the applications of hazard maps
- 4. Explain the types of vulnerabilities and the approaches to assess them.

Course Outcome 3 (CO3):

1. Explain briefly the concept of 'disaster risk'

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- 2. List the strategies for disaster risk management 'before', 'during' and 'after' a disaster
- 3. What is disaster preparedness? Explain the components of a comprehensive disaster preparedness strategy

#### Course Outcome 4 (CO4):

- 1. What is disaster prevention? Distinguish it from disaster mitigation giving examples
- 2. What are the steps to effective disaster communication? What are the barriers to communication?
- 3. Explain capacity building in the context of disaster management

## Course Outcome 5 (CO5):

- 1. Briefly explain the levels of stakeholder participation in the context of disaster risk reduction
- 2. Explain the importance of communication in disaster management
- 3. Explain the benefits and costs of stakeholder participation in disaster management
- 4. How are stakeholders in disaster management identified?

#### Course Outcome 6 (CO6):

- 1. Explain the salient features of the National Policy on Disaster Management in India
- 2. Explain the guiding principles and priorities of action according to the Sendai Framework for Disaster Risk Reduction
- 3. What are Tsunamis? How are they caused?
- 4. Explain the earthquake zonation of India

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#### Model Question paper

QP CODE:	PAGES:3
Reg No:	Name :

# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

#### FIFTH SEMESTER B.TECH DEGREE EXAMINATION, MONTH & YEAR

Course Code: MCN 301

Course Name: Disaster Management

Max.Marks:100

# **Duration: 3 Hours**

#### PART A

# Answer all Questions. Each question carries 3 Marks

- What is the mechanism by which stratospheric ozone protects earth from harmful UV rays?
- 2. What are disasters? What are their causes?
- 3. What is hazard mapping? What are its objectives?
- 4. Explain briefly the concept of 'disaster risk'
- 5. List the strategies for disaster risk management 'before', 'during' and 'after' a disaster
- 6. What is disaster prevention? Distinguish it from disaster mitigation giving examples
- 7. Briefly explain the levels of stakeholder participation in the context of disaster risk reduction
- 8. Explain the importance of communication in disaster management
- 9. What are Tsunamis? How are they caused?
- 10. Explain the earthquake zonation of India

Part B

Answer any one Question from each module. Each question carries 14 Marks

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11.	a. Explain the different types of cyclones and the mechanism of their formation	[10]
disaste	b. Explain with examples, the difference between hazard and risk in the coer management	ntext of
	OR	
12. Ex	xplain the following terms in the context of disaster management	[14]
	posure (b) resilience (c) disaster risk management (d) early warning systems, (e) ment (f) crisis counselling (g) needs assessment	damage
13.	a. What is participatory hazard mapping? How is it conducted? What are its advan	ntages?
		[8]
	b. Explain the applications of hazard maps	[6]
	OR	
14.	Explain the types of vulnerabilities and the approaches to assess them	[14]
15.	a. Explain the core elements of disaster risk management	[8]
	b. Explain the factors that decide the nature of disaster response	[6]
	OR	
16.	a. What is disaster preparedness? Explain the components of a comprehensive preparedness strategy	disaster [6]
	b. Explain the different disaster response actions	[8]
17.	a. Explain the benefits and costs of stakeholder participation in disaster management	ent [10]
	b. How are stakeholders in disaster management identified?	[4]
	OR	
18.	a. What are the steps to effective disaster communication? What are the ba communication?	rriers to
and Rese	b. Explain capacity building in the context of disaster management	[7]
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19. Explain the salient features of the National Policy on Disaster Management in India

[14]

OR

20. Explain the guiding principles and priorities of action according to the Sendai Framework for Disaster Risk Reduction [14]

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# Teaching Plan

	Module 1	5 Hours
1.1	Introduction about various Systems of earth, Lithosphere- composition, rocks, Soils; Atmosphere-layers, ozone layer, greenhouse effect, weather	1 Hour
1.2	Cyclones, atmospheric circulations, Indian Monsoon; hydrosphere- Oceans, inland water bodies; biosphere	1 Hour
1.3	Definition and meaning of key terms in Disaster Risk Reduction and Management- disaster, hazard,	1 Hour
1.4	Exposure, vulnerability, risk, risk assessment, risk mapping, capacity, resilience, disaster risk reduction, Disaster risk management, early warning systems	1 Hour
1.5	Disaster preparedness, disaster prevention, disaster, Mitigation, disaster response, damage assessment, crisis counselling, needs assessment.	1 Hour
	Module 2	5 Hours
2.1	Various Hazard types, Hazard mapping; Different types of Vulnerability types and their assessment	1 Hour
2.2	Vulnerability assessment and types, Physical and social vulnerability	1 Hour
2.3	Economic and environmental vulnerability, Core elements of disaster risk assessment	1 Hour
2.4	Components of a comprehensive disaster preparedness strategy approaches, procedures	1 Hour
2.5	Different disaster response actions	1 Hour
	Module 3	5 Hours
3.1	Introduction to Disaster risk management, Core elements of Disaster Risk Management	1 Hour
3.2	Phases of Disaster Risk Management, Measures for Disaster Risk Reduction	1 Hour
3.3	Measures for Disaster prevention, mitigation, and preparedness.	1 Hour

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3.4	Disaster response- objectives, requirements. Disaster response planning; types of responses.			
3.5	Introduction- Disaster Relief, Relief; international relief organizations.	1 Hour		
	Module 4	5 Hours		
4.1	Participatory stakeholder engagement	1 Hour		
4.2	Importance of disaster communication.	1 Hour		
4.3	Disaster communication- methods, barriers. Crisis counselling	1 Hour		
4.4	Introduction to Capacity Building. Concept – Structural Measures, Non-structural Measures.			
4.5	Introduction to Capacity Assessment, Capacity Assessment; Strengthening, Capacity for Reducing Risk	1 Hour		
	Module 5	5 Hours		
5.1	Introduction-Common disaster types in India.	1 Hour		
5.2	Common disaster legislations in India on disaster management	1 Hour		
5.3	National disaster management policy, Institutional arrangements for disaster management in India.	1 Hour		
5.4	The Sendai Framework for Disaster Risk Reduction and targets	1 Hour		
5.5	The Sendai Framework for Disaster Risk Reduction-priorities for action, guiding principles	1 Hour		



# 20MBA115 LEGAL SYSTEMS FOR BUSINESS CATEGORY L T P CREDIT CORE THEORY 3 0 0 3

**Preamble:** The course provides the student with basic information about the Indian legal system and dispute resolution, and their impact on business. The understanding of legal system is a prerequisite for better decision making. The course gives exposure to students in the areas of legal principles of business contract, aspects in the formation, running and winding up of business, the scope and the issues associated with partnerships, negotiable instruments and cyber law, application of sale of goods act and consumer protection act and different labour regulations in India.

Prerequisite: NIL

Course Outcomes: After the completion of the course the student will be able to

CO1	Examine fundamental legal principles of business contracts
CO2	Analyse the legal aspects in the formation, running and winding up of business
CO3	Analyze the scope and the issues associated with partnerships, negotiable instruments and cyber law
CO4	Evaluate and analyse the scope and application of sale of goods act and consumer protection act.
CO5	Equip the students with insights on different labour regulations in India

# Mapping of course outcomes with program outcomes

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	2	2	2	3
CO2	3	3	3	3	3
CO3	3	3	2	3	3
CO4	3	3	3	3	3
CO5	3	2	3	E53Cl.	3

#### Assessment Pattern

Bloom's Category	Continuous A (in %)	End Semester	
	1	2	Examination (in %)
Remember	10	10	10
Understand	10	10	10
Apply	30	30	30
Analyse	30	30	30
Evaluate	10	10	10
Create	10	10	10





#### Mark distribution

Total Marks	CIE	ESE	ESE Duration
100	40	60	3 hours

Continuous Internal Evaluation Pattern:

Attendance: 4 marks

Continuous Assessment Test (2 numbers):16 marks

Assignment/Quiz/Course project: 10 marks

Seminar and Discussion: 10 marks

Syllabus

	Syllabus
Module 1	Sources of Law - Classification of Law, Natural Justice, History of Indian Judicial system, Indian Contract Act 1872: Definition (Sec 2); Essential elements of a contract - Offer, acceptance, Competency to enter in contracts (Sec 11 &12); Consent- free consent, coercion, undue influence, fraud, misrepresentation, mistake (Sec 13-23); Legality of object & consideration; Types of contracts; Performance of contracts; Void agreement (Sec 24-30); Quasi contracts, Discharge of contracts; Consequences of breach of contract (Sec 73-75) Bailment(S.148 - S.171 & S.180. Salient features of E-contract, Formation of E-contract and Types.
Module 2	The Companies Act 2013 - Characteristics of a company; Kinds of companies; Types of Companies, Formation-S.3, Promoter, Remuneration, Rights & Liabilities of a Promoter, Memorandum of Association (S.4, S.10, S.13), Form, Purpose, Clauses, Alteration. Articles of Association (S.5, S.10, S.14,) Provisions for Membership, Share & Share capital - Distinction between Memorandum & Articles, Incorporation (S.7, S.9 S.12), Prospectus - Public Offer S.25 - S.27, S.30 - S.40; & S.181) Pledge (S.173 - S.179 - Indemnity & Guarantee (S.124, 125 128 - 147) Distinguish Indemnity & Guarantee Laws of Agency Private Offer S.42- Meetings & proceedings; S.173 -S.195 Directors S 149 - 152,164, 165. Boards powers and restrictions; S. 179, 180. Lifting of Corporate Veil. Doctrine of Ultra Vires, Winding up of companies – Modes S.270, 271, 304,
Module 3	The Indian Partnership Act, 1932- Types of Partnerships and types of Partners, Test of Partnership, Partnership deed, and Property of the firm, Limited Liability Partnership Negotiable instrument - Characteristics of Negotiable Instrument Presumption; Promissory Notes, Bills of Exchange & Cheques- Negotiation (Sec 46 to 60); Crossing of cheque&dishonour of cheque (Sec 138 to 142).  Cyber Law - Overview of cyber law, Salient features of the IT Act, 2000, Cybercrime, Intellectual Property Rights.
Module 4	Sale of Goods Act (1930), (Sec 2 - 11) Conditions and warranties; (Sec12 - 17, 59) Rights of an unpaid seller. (S.45 - S.58) Title to goods - (S.27 - 30)-Rights & Duties of Buyer & Seller; (S.31 - 44).  Consumer Protection Act (1986): Consumer dispute, restrictive trade practices, unfair trade practices; Central Consumer Protection Council, State Consumer Protection Council; Consumer Redressal Forum.
Module 5	Industrial Disputes Act, 1947,- Award and settlement- industrial Dispute- Workman Strikes and Lock-out:Lay-off - Retrenchment-Closure - Unfair Labour Practices and Role of Government.  The Minimum Wages Act, 1948- Fixation of minimum rates of wages- working hours and determination of wages and claims.
seling 3	Factories Act, 1948- essential features, Safety, Health and Welfare measures.  The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013- overview.



#### Text Book

1. Kapoor, N.D. Elements of Mercantile Law, Sultan Chand & Sons, New Delhi (2019).

#### References and Suggested Readings

- 1. Gulshan, S.S. and Kapoor, G.K. *Business Law Including Company Law* (12/e), New Age International, New Delhi (2020).
- 2. Majundar, A.K. and Kapoor, G.K. Company Law & Practices, Sultan Chand& Sons, New Delhi. (2017).
- 3. Malik, P.L. Industrial law, Eastern Book Company, LalbaghLucknow (2017).
- 4. Ramaiya, and Ramaiya, A. Guide to the Companies Act (18/e), Wadhwa Book Company, Vikaspuri New Delhi.(2015).
- 5. Singh, Avatar. Company Law, Eastern Book Company, New Delhi (2018).
- 6. Singh, Avatar. Labour and Industrial Laws, Lexis Nexis, (2016).
- 7. Wild, Charles, Weinstein, Stuart Smith and Keenan, *Company Law*, Pearson Longman, United Kingdom (2019).

#### Course Contents and Lecture Schedule

No	Topic	No. of Lectures
1	INTRODUCTION TO LAW AND INDIAN CONTRACT ACT	
1.1	Introduction and Essential elements of a Contract	2 Hours
1.2	Types of Contract, Breach of Contract	2 Hours
1.3	Law of Indemnity and Guarantee, Bailment and Pledge, Law of Agency	3 Hours
2	COMPANIES ACT 2013	
2.1	Types of Companies, Formation of a Company	2 Hours
2.2	Memorandum of Association, Articles of Association	2 Hours
2.3	Prospectus, Meetings, Winding up of Companies	3 Hours
3	PARTNERSHIP ACT, NEGOTIABLE INSTRUMENTS and CYBER LAW	
3.1	Partnership Act	2 Hours
3.2	Negotiable Instruments	3 Hours
3.3	Cyber Law	2 Hours
4	SALE OF GOODS ACT and CONSUMER PROTECTION ACT	
4.1	Conditions and Warranties, Rights of an unpaid seller	2 Hours
4.2	Rights and Duties of buyer and seller	3 Hours
4.3	Consumer Protection Act, Consumer Protection Councils, Consumer Redressal Forums	2 Hours
5	INDUSTRIAL DISPUTES ACT, LAW OF MINIMUM WAGES and FACTO	ORIES ACT
5.1	Different kinds of Industrial disputes, Unfair labour practices	3 Hours
5.2	Kinds of Wages, Law of Minimum Wages	2 Hours
5.3	Factories act and the Sexual Harassment of Women at Workplace	3 Hours





# **Model Question Paper Pattern** APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY FIRST SEMESTER MBA DEGREE EXAMINATION

20MBA115 Question Paper pattern

Max. Marks: 60

ime: 3 Hours

# Answer all questions. Each question carries 2 marks

- 1. 2 Marks from Module I
- 2. 2 Marksfrom Module II
- 3. 2 Marksfrom Module III
- 4. 2 Marksfrom Module IV
- 5. 2 Marksfrom Module V

(5x2 marks = 10 marks)

Part B

# Answer any 3 questions. Each question carries 10 marks

- 6. 10 Marksfrom Module I
- 7. 10 Marksfrom Module II
- 8. 10 Marksfrom Module III
- 9. 10 Marksfrom Module IV
- 10. 10 Marksfrom Module V

(3x10 marks = 30 marks)

Part C

Compulsory Question 20 marks

Estd

11. 20 Marks (From any Module or combination of Modules as the case may be)

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# **Model Question paper**

# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY FIRST SEMESTER MBA DEGREE EXAMINATION

#### 20MBA115 Legal Systems for Business

Max. Marks: 60

Duration: 3 Hours

#### PART A

# Answer all questions. Each question carries 2 marks

- 1. Identify the different cases in which an agreement is 'Void-Ab-Initio'.
- 2. Doctrine of Ultra-Vires.
- 3. Identify the conditions which makes partnership a 'Partnership at will'
- 4. Distinguish between conditions and warranties
- 5. Lockout has been described as the 'anti thesis' of strike by the Supreme Court of India, explain.

(5x2 marks = 10 marks)

#### PART B

# Answer any three questions. Each question carries 10 marks

- 6. Appraise the essential elements of a valid contract.
- 7. Review the Formation of a Company.
- 8. Elaborate on negotiable instruments and its main features? Compare bill of exchange and a cheque
- Examinethe role of consumer redressal forums in resolving consumer Complaints
- 10.Safety, Health and Welfare measures plays an important role in establishing a supreme work environment, explain in light of Factories Act of 1948.

(3x10 marks = 30 marks)

#### PART

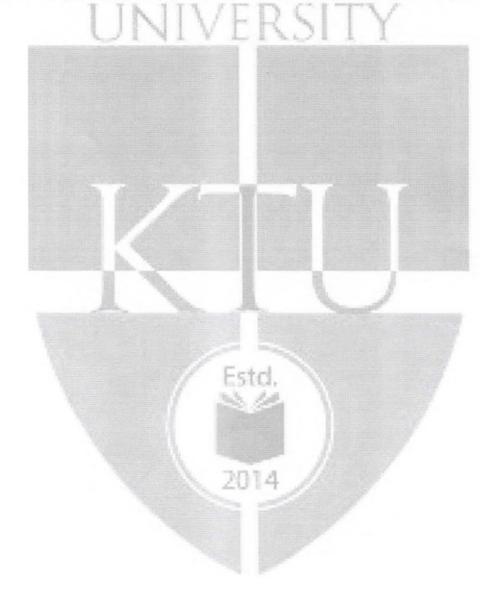
#### Compulsory. Answer all the questions. This part carries 20 marks

11. On 1 st June 2018, Karan had entered into a contract with Lakhan to construct and finish his house and finally hand it over to Lakhan latest by 30 th April 2019. Further, Lakhan had also communicated to Karan that he (Lakhan) had, in turn, entered into a contract with Vandana, the prospective tenant, to let the house out to her and to give its possession to her with effect from 1 st May 2019. But, the quality of the construction of the house by Karan was so poor that on 31st March 2019 itself

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the house had fallen down and, therefore it had to be reconstructed over again by Lakhan.

- a) What remedies are likely to be awarded by the court if Lakhan files a suit against Karan? (10 Marks)
- b) Would the legal position be any different if, Lakhan would not have specially apparised Karan to the effect that Lakhan had already entered into a contract with Vandana to let the house out to her and to give its possession to her with effect from 1 st May 2009. (10 Marks)





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20MBA113	ETHICS, GOVERNANCE AND CORPORATE	CATEGORY	L	Т	Р	CREDIT
	RESPONSIBILITY	CORE	3	0	0	3
		THEORY				

**Preamble:** sensitize the student on the various ethical aspects concerning the functioning of business enterprises. The course aims to equip the students to be honest and be responsible to the society. The knowledge of the subject will improve ethical reasoning by correlating moral concepts to business practices. The course aims to create awareness among students on the importance of Corporate Governance and social responsibility.

Prerequisite: None

Course Outcomes: After the completion of the course the student will be able to

CO 1	Examine the importance of ethics in business	
CO 2	Apply ethical decision making in business management	
CO 3	Analyze the importance of corporate governance	
CO 4	Assess the developments in Corporate governance	
CO 5	Create the sense of corporate social responsibility within oneself	

#### Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5	
CO 1	3	3	3	3	3	
CO 2	3	3	3	3	3	
CO 3	3	3	3	3	3	
CO 4	3	3	3	3	3	
CO 5	3	3	3	3	3	

#### **Assessment Pattern**

Bloom's Category	Continuous (in %)	Continuous Assessment Tests (in %)		
	1	2014 2/	Examination (in %)	
Remember	10	10	10	
Understand	10	10	10	
Apply	30	30	30	
Analyse	30	30	30	
Evaluate	10	10	10	
Create	10	10	10	



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#### Mark distribution

Total Marks	CIE	ESE	ESE Duration
100	40	60	3 hours

# Continuous Internal Evaluation Pattern: Attendance : 4 marks Continuous Assessment Test (2 numbers) :16 marks Assignment/Quiz/Course project :10 marks Seminar and Discussion :10 marks

	Syllabus
Module 1	Introduction to Ethics: Meaning & Nature of Business Ethics, Characteristics; Causes of unethical behaviour; Theories of Ethics; Indian Ethos and Values system-Indian Work Ethics; Law and Ethics
	Ethics Programme – code of ethics – ethics training – ethics committee – ethics officer, Ethics Audit, Transparency International - Whistle Blowing – classification – legal support to Whistle-Blower – Tips to successful Whistle Blowing
Module 2	Ethics in functional areas of business: Financial Management (Window dressing, misleading financial analysis, insider trading, churning) —Human Resource Management — (Discrimination— age, gender, race) sexual harassment, ethics at work place, issues affecting privacy of employees, fairness of employment contracts, occupational safety—Marketing Management — Pricing issues like Price discrimination, Price fixing, Price skimming, Ethics in advertising (surrogate, deceptive advertising), Distribution issues like tying arrangement, black market Production Management — Process issues like effluents, optimisation of resources like power & water, Product issues like additive & intrinsically hazardous products, genetically modified products, flawed products— Ethics in Information Technology  — Ethics in customer and vendor relationship
Module 3	Corporate Governance: - Definition - need for corporate governance - elements of good corporate governance - evidence of corporate governance from Arthashasthra -corporate governance theories - Agency Theory - Shareholder Theory - Stake Holder Theory - Stewardship Theory; Codes and guidelines for corporate governance
Module 4	Developments in corporate governance—in UK, US and India—board effectiveness—issues and challenges—role and types of directors—corporate board committees—corporate disclosure—emerging trends in corporate governance—corporate board duties—responsibilities and liabilities. Legal framework for corporate governance Companies Act
Module 5	Corporate Social Responsibility: Definition- Evolution- Need for CSR; Theoretical perspectives; Corporate citizenship; Business practices; Strategies for CSR; Challenges and implementation





#### **Text Book**

1. Boatright, John, R, and Smith, Jefferey, D, Ethics and Conduct of Business, Pearson Publications, NewJersey 2016

#### References and Suggested Readings

- Balachandran, V, and Chandrasekharan, V, Corporate Governance, Ethics and Social Responsibility, PHI Learning Pvt Ltd, New Delhi (2011)
- 2. Crane, Andrew, Matten, Dirk, Glozer, Sarah and Spenc, Laura, *Business Ethics*, Oxford University Press, Oxford (2019)
- Gupta, Ananda, D, Business Ethics: Texts and Cases form Indian Perspective, Springer India, New Delhi, (2013)
- Rezaee, Zabihollah, Business Sustainability, Corporate Governance, and Organizational Ethics, John Wiley & Sons, New Jersey (2019)
- Shaw ,William, H, Business Ethics: Text Book with Cases, Cengage Learning, Boston (2014) Spinallo, Richard, A, Business Ethics: Contemporary Issues and Cases, Sage Publications, California (2019)

#### **Course Content and Lecture Schedule**

No	Topic	No. of Lectures
1	Business Ethics	
1.1	Introduction to ethics and its ancillary concepts	2
1.2	Theories of ethics	3
1.3	Ethical audit mechanisms-whistle-blowing	2
2	Ethics in Functional Areas	•
2.1	Ethics in Finance	2
2.2	Ethics in HR and Marketing	3
2.3	Ethics in HR and Marketing, customer and vendor relationship	2
3	Corporate Governance	
3.1	Need and relevance of Corporate Governance	2
3.2	Corporate Governance Theories	3
3.3	Discussion on Arthashasthra	2
4	Corporate governance Trends	
4.1	Practices in the UK, the US and India	3
4.2	Discussion on Board of Directors	2
4.3	Legal frameworks	3
5	CSR	
5.1	History and Evolution of CSR	2
5.2	Corporate Citizenship	3
5.3	Limitations and Challenges	2





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# Model Question Paper Pattern APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY FIRST SEMESTER MBA DEGREE EXAMINATION

20MBA113 Question Paper pattern

Max. Marks: 60

Time: 3 Hours

# Answer all questions. Each question carries 2 marks

- 1. 2 Marks from Module I
- 2. 2 Marksfrom Module II
- 3. 2 Marksfrom Module III
- 4. 2 Marksfrom Module IV
- 5. 2 Marksfrom Module V

(5x2 marks = 10 marks)

#### Part B

#### Answer any 3 questions. Each question carries 10 marks

- 6. 10 Marksfrom Module I
- 7. 10 Marksfrom Module II
- 8. 10 Marksfrom Module III
- 9. 10 Marksfrom Module IV
- 10. 10 Marksfrom Module V

Estd.

(3x10 marks = 30 marks)

#### Part C

# Compulsory Question 20 marks

11. 20 Marks (From any Module or combination of Modules as the case may be)

and Research

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#### Model Question paper

# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

#### FIRST SEMESTER MBA DEGREE EXAMINATION

#### 20MBA113 ETHICS, GOVERNANCE AND CORPORATE RESPONSIBILITY

Max. Marks: 60

**Duration: 3 Hours** 

#### PART A

#### Answer all questions. Each question carries 2 marks.

- 1. Identify the components of the nature of business ethics
- 2. Enumerate any four roles of ethics in HR
- 3. Discuss the any four points about the Agency theory
- 4. Brief on the trends of corporate governance in India
- 5. Express any four points that support the need for CSR

(5x2 marks = 10 marks)

#### PART B

#### Answer any three questions. Each question carries 10 marks

- 6. Appraise the salient points of any three theories of ethics
- 7. You are launching a mobile game. Enumerate the ethical decisions you will adopt.
- 8. Explain the importance of the Arthashasthra with respect to corporate governance
- 9. List down the roles and responsibilities of the board of directors
- 10. "CSR is being degraded to a mere act of obligation rather than selflessness." Examine.

(3x10 marks = 30 marks)

#### PARTC

#### Compulsory, Answer all the questions. This part carries 20 marks

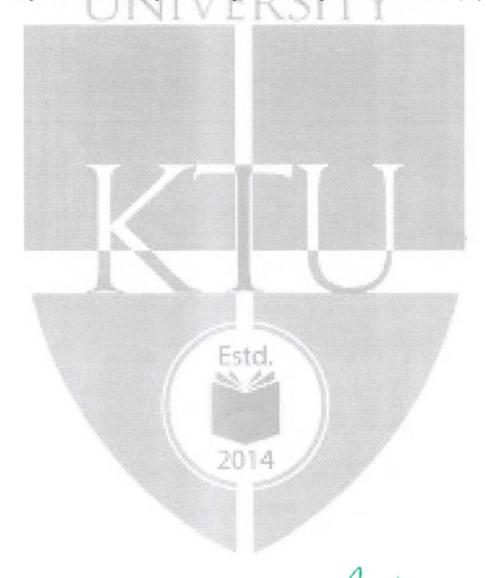
11.Enron started as an energy producer in 1985 and later on move into energy trading. The company that was making huge profits by the year 2000 and was also rated the seventh largest company on the Fortune 500, unexpectedly collapsed in the year 2001. Enron had impressed the public by entering into a unique concept of trading energy, and it deceived the public with false profits. Also the company had huge debts, all of which were not shown on the company accounts. To hide these large amounts of debt and losses, Enron had made many partnerships with the companies that were run by Enron executives who profited from this deal and deceived the public. It used creative accounting techniques and cooked its books which kept the investors in dark and led o an all time rise in its stock prices. But by August 2001, the existing CEO of the company resigned, and it reported huge losses in October 2001, which was its first quarterly loss in four years. By late 2001, it admitted that the company had been cooking its books and showing inflated profits. Enron in December 2001, filed for chapter 11 bankruptcy, and later the matter was investigated by the U.S Justice Department and within a short span of time, the

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company had large amounts of unpaid debt and worthless shares. It was also revealed that the top executives of the company made huge profits by selling Enron shares at the right time, thereby leaving all the losses to be borne by other investors. Arthur Andersen, that was one of the biggest 5 accounting firms was the auditor of Enron and was held one of the biggest accused parties to this scandal. Loopholes in the system of Corporate Governance were, thus, exploited by the company resulting in the scam. Thus we need substantial reforms in the Corporate Governance and ethical reporting practices, thereby making corporate dealings more transparent, and in favour of general public.

#### **Ouestions**

- 1. Analyse the case in terms of importance of Corporate Governance (10)
- 2. How can Corporate Governance practices improve the Corporate environment? (10)





Course Code	Course Name	Category	L	T	P	Credit
20MBA314	MANAGEMENT OF SUSTAINABLE BUSINESS	Elective	3	0	0	3

**Preamble:** This course is to create awareness and acquaint students with the tools to analyse, evaluate, improve, develop framework and create business models that alleviate challenges to mankind related to climate change, energy, waste, labour, and poverty in the global scenario. It also aims to review green technologies that are relevant for entrepreneurs and managers.

Prerequisite: Nil

Course Outcomes: After the completion of the course the student will be able to:

CO 1	Examine the impact of climate change and global warming on society and environment.
CO 2	Devise measures for carbon mitigation, carbon adaptation and measure social impact of ozone layer depletion.
CO 3	Categorize business strategies for green markets and relate alternate energy and waste management measures.
CO 4	Evaluate sustainable engineering measures and lean practices for business innovation.
CO 5	Inculcate CSR responsibility and value the legal aspects of sustainability.

# Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	3	1	The same of	3	The same
CO 2	3	2		3	
CO 3	3	3		3	
CO 4	3	3	3	3	3
CO 5	3	1		Estd.	3

#### **Assessment Pattern**

Bloom's Category	THE RESERVE THE PROPERTY AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS O	Assessment Tests in %) [ ] 4	End Semester Examination (in marks)		
	1	- 2	(m marks)		
Remember	20	20	10		
Understand	40	40	30		
Apply	40	40	20		
Analyze			20		
Evaluate	Can be done through Assignments/ Seminars/Mini Projects				
Create	Can be done through Assignments/ Seminars/Mini Projects				

#### Mark distribution

Total Marks	CIE	ESE	ESE Duration
100	40	60	3 hours

Continuous Internal Evaluation Pattern:

Attendance

4 marks

Continuous Assessment Test (2 numbers)

: 16 marks

Assignment/Quiz/Course project

: 10 marks

Seminar and Discussion

: 10 marks

#### **End Semester Examination Pattern:**

There will be three parts; Part A, Part B and part C. Part A contains 5 questions (one question each from each module) of 2 marks each (Students should answer all questions). Part B contains 5 questions (one question each from each module) of 10 marks each (Students have the choice of answering any three questions). Part C contains a compulsory question (can have sub-divisions) of 20 marks (from any of the modules or combination) may be in application-level or case study.

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# **Model Question paper**

# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

# FOURTH SEMESTER MBA DEGREE EXAMINATION

#### 20MBA314- MANAGEMENT OF SUSTAINABLE BUSINESS

Max. Marks: 60

Duration: 3 Hours

#### PART A

Answer all questions. Each question carries 2 marks.

- 1. Write a note on Kyoto Protocol?
- 2. Write a note ecological footprint.
- 3. Define waste management.
- 4. Write a short note on Poverty and sustainable development.
- 5. Highlight the need of CSR activities?

(5x2 marks = 10 marks)

#### PART B

Answer any three questions. Each question carries 10 marks

- 6. Discuss the concept of sustainable livelihood and how it can be achieved?
- 7. Elaborate on various measurement tools for sustainability. Also comment on evaluation of social impact, economic impact and environment impact.
- 8. Discuss in detail the major objectives and fundamental principles in Green building concept and describe any one Global Green rating system.
- 9. Discuss in detail the major objectives and fundamental principles in green building concept and green entrepreneurship.
- 10. Describe important Environmental Regulations in India and their impact on sustainable development.

(3x10 marks = 30 marks)

#### PART C

Compulsory Question. This question carries 20 marks

11. Along with being a basic human need, water is also a basic constituent for the survival of eco-systems of which people and their cultures are important components. The water resources distribution in India, predominantly an agrarian economy, is highly asymmetric and has been accompanied by severe decline in per-capita water availability during the past 50 years, with agriculture being the maximum water user, leading to over-exploitation of ground water and steadily depleting water tables along with a heavy energy bill. Gujarat State falls in a water stressed zone of the country and is also the victim of intra-state asymmetric water availability leading to an

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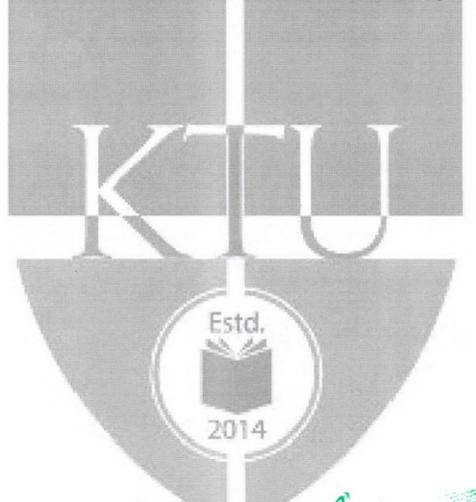
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unwanted socio-economic disparity, with the following results: a poor literacy rate in water-deficit districts; concentration of industry and housing in regions with better water resources endowment; and demographic change, e.g., the shift of the prime workforce from drought-prone districts to water-surplus districts. This in turn denies the right to life development, health, food, education and work for these migrant communities. To ensure a balanced development when there is less than one acre per capita of cultivable landholding and over 14 000 villages out of 18 563 are suffering from water scarcity, there is no other alternative but to transfer water from surplus to scarce areas of the state. Some critical questions on water issues, food security, energy viability, rights of people, and most importantly, water security in the context of sustainable development.

1. Analyse the case in detail? (10)

2. What are the factors, according to you, facilitate sustainable development? (10)





	Syllabus				
Module 1	Introduction to Sustainability: Introduction, concept and need for sustainability-Pillars of Sustainability-Energy Consumption and its Relationship to Climate, Change- The Potential Impacts of Climate Change-Technology Wedges- Systems thinking for sustainability-Challenges faced by sustainable development.				
Module 2	Measurement tools for Sustainability: Technological Solutions for Carbon Mitigation and Carbon, Adaptation- carbon credits, carbon trading, carbon footprint-ozone layer depletion-measurement sustainability-Life Cycle Analysis-Environment Impact Assessment (EIA)-Green House Gas inventories-Measuring social impacts and benefits.				
Module 3	<b>Driving towards sustainability:</b> Pollution-Air, Water and Noise -Alternate energy resources from solar, wind, fuel cells, biofuel, tidal and geothermal-Waste - to - Energy -Sustainable waste water treatment-solid waste management-zero waste concept and green buildings- Aspects of cleaner productionGreen supply chain- 3 R concept- Concept of Environmental justice.				
Module 4	Integrating Sustainability into the Business: Business innovation-framework for Sustainability in action- Resource Optimization, Triple Bottom line concept-Lean start-up, Lean Government, Agility of processes-Lean tool kit- cracking the unsolvable innovatively in business- Green entrepreneurship: Difference between entrepreneurship and Green Entrepreneurship-Nano technology-Developing a roadmap for transformation: Individual and Organisational levels.				
CSR & Environmental Laws: CSR Guidelines for companies on sustainal Clean Development Mechanism- ISO 14000- Environment Legislation in Environment Protection Act 1986, Air Act 1981, Water Act 1974 -The Na Green Tribunal Act, 2010- Environmental labels- Ethics and Sustainal Sustainable Development Goals –Sustainable Development Goals by the The Sustainable Development Goals and their Relevance for Business.					

#### **Text Books**

- 1. Ni bin Chang (2010), System Analysis for Sustainable Energy: Theory and Applications, McGrawHill Publications.
- 2. Niko Roorda (2012), Fundamentals of Sustainable Development, Routledge.
- 3. Robert Brinkmann, (2016), Introduction to Sustainability, Wiley.

#### References and Suggested Readings

- Water Resource Management http://www.ipcc.ch/pdf/assessmentreport/ar4/wg2/ar4-wg2-chapter3.pdf
- 2. Properties, Goods and Services, http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter4.pdf
- Impact on coastal zones. http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4wg2-chapter6.pdf
- 4. Impact on Human health http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter8.pdf
- 5. Impact on Asia. http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter10.pdf
- 6. Climate change Risk, http://www.ipcc.eh/pdf/assessment-report/ar4/wg2/ar4-wg2-

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- 7. Sustainable development and adaptation to climate change, http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter20.pdf
- Policy Response to Climate Change, Stern Review, http://mudancasclimaticas.cptec.inpe.br/~rmclima/pdfs/destaques/sternreview\_report\_complete.pdf
- Environmental Protection Agency (2003). Lean Systems Research in Manufacturing Systems for greener Performance. http://www.epa.gov/lean/environment/pdf/leanreport.pdf
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- Business strategies for sustainable development. https://www.iisd.org/business/pdf/business\_strategy.pdf
- 12. http://isites.harvard.edu/fs/docs/icb.topic541380.files/Business%20Sustainability.pdf
- 13. Measuring and Evaluating Business Sustainability: Development and Application of Corporate Index of Sustainability Performance in book Sustainability Appraisal: Quantitative Methods and Mathematical Techniques for Environmental Performance Evaluation, pp.33-61, Editors: Erechtchoukova M. G., Peter A Khaiter, Paulina Golinska. Publisher: Springer Berlin Heidelberg.
- 14. UNDP Guidelines on CSR for Companies, https://www.spcc.pl/images/file/forums workhops/csr self assesment undp.pdf

#### Course Contents and Lecture Schedule

No	Topic				
1	Introduction to Sustainability	Lectures			
1.1	Introduction to Sustainability – Concept and Need	2 Hour			
1.2	Pillars of Sustainability, climate change	2 Hours			
1.3	Technology Wedges	2 Hours			
1.4	The Sustainable Development Goals	2 Hours			
2	Measurement tools for Sustainability				
2.1	Carbon Mitigation and Carbon Adaptation	2 Hours			
2.2	Carbon trading and Carbon Footprint, GHG Inventory	2 Hours			
2.3	Life Cycle Analysis, Social Impacts and benefits, Environment Impact				
3	Driving towards sustainability				
3.1	Alternate sources of energy	2 Hours			
3.2	Sustainable waste management				
3.3	Green Design in Buildings, Environmental Justice				
4	Integrating Sustainability into the Business				
4.1	Consumption challenges and Innovation for Sustainability	2 Hours			
4.2	Triple Bottom Line and Lean Philosophy	2 Hours			
4.3	Individual and Organisational level transformational road-map	2 Hours			
4.4	Green Entrepreneurship	1 Hour			
5	CSR & Environmental Laws				
5.1	CSR Guidelines for sustainability	2 Hours			
5.2	Various Laws and Legislations, Environmental Labels	2 Hours			
5.3	Ethics and Sustainability: Sustainable Development Goals by the UN	3 Hours			
	Total	36 Hours			

Course Code	Course Name	Category	L	T	P	Credit
20MBA316	FAMILY BUSINESS	Elective	3	0	0	3

**Preamble:** The course on Family Business helps the students to familiarise with the basics of family business. The course equip students to understand the basics of starting a family business and the importance of yearly strategic planning, different family business development models, the different types of family business, need for choosing the form of business for the family situation, the concepts of narcissism, envy and myths in family firms, the importance and process of leadership transition, transition and change in family business, basics of family business governance, the roots of family warfare and be able to identify the same in their family businesses.

Prerequisite: NIL

Course Outcomes: After the completion of the course the student will be able to:

CO 1	Evaluate the basics of starting a family business and different family business development models.
CO 2	Analyse different types of family business and the need for choosing the form of business for the family situation.
CO 3	Appraise the concepts of narcissism, envy and myths in family firms.
CO 4	Explain the importance and process of leadership transition and change in family business.
CO 5	Evaluate the basics of family business governance and the roots of family warfare.

# Mapping of course outcomes with program outcomes

	PO 1	PO 2	PO 3	PO 4	PO 5
CO 1	3	2	2	2	2
CO 2	3	2	1	2	. 1
CO 3	3	1	2	Fs+2].	2
CO 4	3	2	3	2	2
CO 5	3	2	2	2	2

#### Assessment Pattern

Bloom's Category	Continuous As (in	sessment Tests %)	End Semester Examination (in marks)	
	1	2		
Remember	20	20	10	
Understand	40	40	30	
Apply	40	40	20	
Analyze			20	
Evaluate	Can be done	ents/ Seminars/Mini Projects		
Create	Can be done through Assignments/ Seminars/Mini Projects			

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